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50th Annual Report

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FEDERAL COMMUNICATIONS COMMISSION
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50th Anniversary
1934 - 1984

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Federal Communications Commission

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Commissioners

Members of the Federal Communications Commission
during FY 84

Mark S. Fowler, Chairman
(Term expires June 30, 1986)

James H. Quello
(Term expires June 30, 1991)

Mimi Weyforth Dawson
(Term expires June 30, 1988)

Henry M. Rivera
(Term expires June 30, 1987)

Dennis R. Patrick
(Term expires June 30, 1985)

[Biographical sketches of Commission members, Page 1]

Letter of Transmittal

FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

To the Congress of the United States:

We submit for your consideration the 50th Annual Report of the Federal Communications Commission for fiscal year 1984. It includes information required by the Communications Act of 1934, as amended, and the Communications Satellite Act of 1962.

The report contains a comprehensive review of key events in the Commission's areas of regulatory concern: broadcasting, cable television, common carrier communications (including satellites), private radio services, spectrum management and frequency allocations.

It also covers major administrative matters, engineering, legal and legislative activities.

Respectfully,
MARK S. FOWLER
Chairman

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Commissioners

Mark S. Fowler, Chairman—Republican. Nominated FCC Chairman by President Reagan; confirmed by the Senate May 14, 1981; sworn in May 18, 1981. Term ends June 30, 1986. Born in Toronto, Ont., Oct. 6, 1941, with dual citizenship; later elected U.S. citizenship. Formerly senior partner in Washington, D.C., communications law firm of Fowler & Myers. Communications counsel to the Reagan for President Committee in 1979-80, the Reagan-Bush committee during the 1980 campaign and the 1975-76 Reagan campaign committee. Headed FCC transition team after 1980 election and was co-director of Legal and Administrative Agencies Transition Group, Office of the President-Elect. Ten years broadcasting experience, including part-time announcing at radio stations during high school; announcer at WDVH(AM), Gainesville, while attending University of Florida. After graduation was full-time announcer, WKEE-AM-FM, Huntington, W. Va., 1963-64; announcer and sales representative, WMEG (now WMEL), Melbourne, Fla., 1964-65; announcer, sales representative, program director and production manager at WDVH while attending law school, 1965-70. Joined Smith & Pepper, Washington, D.C., communications law firm, 1970. University of Florida, 1966; University of Florida College of Law, 1969.

James H. Quello—Democrat. Nominated to Commission by President Nixon in 1974; reappointed by President Reagan in 1981 and again in 1984 for a third term; confirmed by the Senate June 15, 1984; sworn in July 26, 1984. Term ends June 30, 1991. Born in Laurium, Mich., Apr. 21, 1914. Rose from position of promotion manager of radio station WJR, Detroit, 1947; vice president, general manager, 1960; retired as vice president, Capital Cities Broadcasting Corporation, 1972. Detroit Housing and Urban Renewal Commissioner, 1951-73, and trustee Michigan Veterans Trust Fund, 1951-74. Member of Governor's Special Commission on Urban Problems; Governor's Special Study Committee on Legislative Compensation; assistant national public relations chairman, Veterans of Foreign Wars; TV-radio chairman, United Foundation; executive board member, Boy Scouts of America; and board member, American Negro Emancipation Centennial. Michigan State University, B.A., 1935. Honorary doctorate of public service, Northern Michigan University, 1975; distinguished alumni award and honorary doctorate of humanities, Michigan State University, 1974 and 1977, respectively.

Mimi Weyforth Dawson—Republican. Nominated by President Reagan; confirmed by the Senate June 4, 1981; sworn in July 6, 1981. Term ends June 30, 1988. Born in St. Louis, Mo., Aug. 31, 1944. Appointed press secretary to U.S. Sen. Robert Packwood, R-Ore., 1973; legislative director, 1975; and administrative assistant and chief of staff, 1976. Coordinated staff activities of National Republican Senatorial Conference and in 1978-79 was staff coordinator for Senate Republican Conference. Legislative assistant to U.S. Rep. James

Symington, D-Mo., 1968-72. Legislative assistant and press secretary to U.S. Rep. Richard Ichord, D-Mo., 1973. Washington University (St. Louis, Mo.), B.A. in government, 1966. Member of American Council of Young Political Leaders, secretary-general of the Atlantic Association of Young Political Leaders, Women's Campaign Fund and Washington University Alumni Association.

Henry M. Rivera—Democrat. Nominated by President Reagan; confirmed by Senate July 31, 1981; sworn in Aug. 10, 1981. Term ends June 30, 1987. Born in Albuquerque, N.M., Sept. 25, 1946. Formerly partner in Albuquerque law firm of Sutin, Thayer & Browne. Vice president, president-elect and member of board of directors of Albuquerque Bar Association. Member of New Mexico Supreme Court committee on rules of civil procedure and trustee of University of New Mexico Law School Foundation. President of young lawyers division of New Mexico State Bar, 1976-77. State delegate to American Bar Association young lawyers division, 1977-78. Elected chairman of the board-elect of the American Diabetes Association, 1984. Awarded Bronze Star and Army commendation medals for service in Vietnam, 1968-70. B.A. degree in economics and law degree from University of New Mexico; degree in business administration/accounting, University of Albuquerque; edited "Natural Resources Journal," published by the law school; was chief justice of graduate students association court and vice president of student bar association. Outstanding Young Lawyer Award, State Bar of New Mexico-Young Lawyers Division, 1981.

Dennis R. Patrick—Republican. Nominated by President Reagan; sworn in Dec. 2, 1983. Term ends June 30, 1985. Born in Glendale, Calif., June 1, 1951. Associate Director of Presidential Personnel at the White House, 1981-83. Special assistant to the Administrator of the National Telecommunications and Information Administration at the Department of Commerce, 1983. Formerly member of the Los Angeles law firm of Adams, Dugue and Hazeltine, 1976-81. A.B. degree magna cum laude, Occidental College, 1973, where he was elected to membership in Phi Beta Kappa. J.D. degree, University of California at Los Angeles, 1976. While in law school, served as law clerk to the Honorable Justice William P. Clark, California Supreme Court.

The Federal Communications Commission is an independent government agency responsible directly to Congress. It was established by the Communications Act of 1934. It is charged with regulating interstate and international communications by radio, television, wire, satellite and cable. Its jurisdiction covers the 50 states and territories, the District of Columbia and the possessions of the United States.

The FCC is directed by five Commissioners appointed by the President and confirmed by the Senate for 7-year terms.

The President designates one of the Commissioners to serve as Chairman. The Chairman is the chief executive officer of the Commission and has delegated management and administrative responsibility to the Managing Director. Certain other functions are delegated to staff units and bureaus and to committees of Commissioners. The Commissioners hold regular open and closed agenda meetings and special meetings. They also may act between meetings by "circulation"—a procedure by which a document is submitted to each Commissioner individually for consideration and official acceptance.

The Chairman presides at all of the Commission's meetings. He coordinates and organizes the work of the Commission and represents the agency in legislative matters and in relations with other government departments and agencies. If the Chairman is absent or the office is vacant, the Commission designates one of its members to act temporarily as Chairman.

The Bureaus and Offices

Office of Plans and Policy

The Office of Plans and Policy (OPP) serves as a major economic technical policy adviser to the Commission by analyzing agenda items and developing long-term policy planning. OPP is responsible directly to the Commission and is supervised by the Chairman. The OPP Chief coordinates all policy research and development activities, both within the FCC and with other agencies; recommends budget levels and priorities for policy research programs, and serves as account manager for all contract research studies funded by the Commission.

Office of Congressional and Public Affairs

The Office of Congressional and Public Affairs (OCPA) is responsible for the Commission's news media, consumer assistance and small business, minority enterprise and legislative affairs programs. OCPA's functions include informing the public of the Commission's regulatory requirements, facilitating public participation in the FCC's decisionmaking processes, apprising the public of FCC policies promoting minority participation in telecommunications and implementing the agency's legislative programs in the telecommunications industry.

OCPA includes the Legislative Affairs Division, the News Media Division, the Consumer Assistance and Small Business Division and an assistant director for minority enterprise. OCPA communicates the FCC's policies regarding telecommunications to the Congress, handles the Commission's congressional correspondence, issues daily news releases, public notices and other informational material, prepares the Annual Report and other publications and handles mail and in-person information dissemination. It also provides internal informational services.

(The Office of Public Affairs, the legislative affairs functions of the Office of General Counsel and the congressional correspondence functions of the Office of the Chairman were consolidated into OCPA effective Dec. 10, 1984.)

Hearings and Review

Administrative Law Judges preside over hearings and issue initial decisions. Generally, review of initial decisions is performed by the Review Board which is composed of members who are Commission employees. Decisions of the Review Board may be reviewed by the full Commission.

The Chief Scientist and General Counsel

The Chief Scientist is the FCC's technical adviser, while the General Counsel is the agency's legal adviser. Both act on international matters and in regulatory areas exceeding the responsibility of a single bureau.

The Chief Scientist advises the Commission on technical, engineering and scientific matters.

The General Counsel advises the Commission on legal issues involved in establishing and implementing policy, handles legal questions affecting the agency's internal operations, coordinates the prepartion of its legislative program and represents the Commission in court. Through its Adjudication Division, the Office of General Counsel also assists the Commission in reviewing Review Board decisions, and in specific cases, those of the Administrative Law Judges; it also assist in drafting FCC decisions in adjudicatory cases.

The Managing Director

Under the supervision and direction of the Chairman, the Managing Director serves as the Commission's chief operating and executive official. The Managing Director provides managerial leadership to and exercises supervision and direction over the FCC's bureaus and staff offices with respect to management and administrative matters; formulates and administers all management and administrative policy programs and directives for the Commission; assists the Chairman in carrying out his administrative responsibilities as head of the agency; advises the Chairman, Commissioners and management on administrative and related matters.

In addition, the Managing Director administers the Commission's management by objectives (MBO) and program evaluation systems and directs agency efforts to improve management effectiveness, operational efficiency and employee productivity.

Finally, the Managing Director plans and manages the administrative affairs of the Commission, including personnel, labor relations, budget and financial, information and processing, analysis, procurement, office space, administrative services, records and security. Under the direction of the

Defense Commissioner, the Managing Director also coordinates the defense activities of the Commission.

The Operating Bureaus

Four bureaus conduct the principal FCC operations: Mass Media, Common Carrier, Private Radio and Field Operations.

The Mass Media Bureau regulates AM, FM and TV broadcast stations and related facilities; administers and enforces cable television rules and licenses private microwave radio facilities used by cable systems.

The Common Carrier Bureau regulates wire and radio communications common carriers such as telephone, telegraph and satellite companies.

The Private Radio Bureau regulates radio stations that serve the communications needs of businesses, individuals, nonprofit organizations, and state and local governments including the following uses: private land mobile, private operational fixed microwave, aviation, marine, personal, amateur and disaster.

Each bureau is responsible for developing and implementing a regulatory program, processing applications for licenses or other filings, analyzing complaints, conducting investigations and taking part in FCC hearings.

The fourth bureau—Field Operations—detects violations of radio regulations, monitors transmissions, inspects stations, investigates complaints of radio interference and issues violation notices. The bureau maintains field offices and monitoring stations throughout the United States. It examines and licenses radio operators, processes applications for painting, lighting and placing antenna towers and furnishes direction-finding aids for ships and aircraft in distress.

Administrative Matters

Equal Employment

The FCC's Equal Employment Opportunity (EEO) Office ensures equal employment for Commission employees and for job applicants. This unit is assigned to the Managing Director and reports to that office and to the Chairman.

The director of the internal EEO Office recommends and implements actions to assure awareness of EEO objectives and the practice of equal opportunity in the recruitment, hiring, training and promotion of employees, and to ensure fair and prompt processing of discrimination complaints filed within the agency. Also located in the internal EEO Office are the Federal Women's Program and the Hispanic Employment Program, which are designed to meet the needs of their specific constituencies through counseling, training and implementation of special emphasis programs.

Other functions involve developing a multi-year affirmative action plan according to the assessed needs of the Commission for approval by the Equal Employment Opportunity Commission, and an information system to inform the Managing Director, the Chairman, managers and employees about the status of this program.

Equal Access to Justice Act

On Jan. 22, 1982, the Commission issued final rules implementing the Equal Access to Justice Act (EAJA). The EAJA provides for the award of attorney's fees and other expenses to qualified parties who prevail over the Federal Government in certain administrative and court proceedings. The FCC's EAJA rules detail the procedures for applying for attorney's fees from the Commission and substantially follow the model rules drafted by the Administrative Conference of the United States. In fiscal year 1984, the Commission received one application for attorney's fees pursuant to the EAJA rules. The application was denied by an administrative law judge; no appeal was taken to the Commission.

Freedom of Information Act

On Feb. 4, 1975, the Commission revised its rules to comply with the requirements of the Freedom of Information Act (FOIA), as amended by Congress in November 1974. The FOIA and the amendments to FCC rules apply to requests for inspection of records received by the Commission on or after Feb. 19, 1975.

The amended FOIA requires agencies to publish indexes of final opinions in hearing cases, including concurring and dissenting opinions, statements of policy and interpretations adopted by the agency but not published in the *Federal Register*. Administrative staff manuals and instructions to the staff that affect members of the public also must be published.

The FCC rules specify the required contents of requests for records that are not routinely available. They also provide time limits for acting on requests for records and applications for review of adverse decisions. In addition, they require disclosure of the names and titles of persons responsible for denying a request for inspection and provide for deletion of exempted portions of a record and disclosure of the remainder.

On Nov. 18, 1980, the Commission amended its FOIA rules and modified the search and copying fees relating to FOIA disclosure requests. The primary purposes of the amendment were to correlate search fees with the hourly labor costs expended by employees conducting these searches. Section 0.466(a) of the rules was revised to specify the hourly fees at the various GS levels. Sections 0.465(c)(3) and 0.466(c) were altered to include a new criterion to be used in considering requests for waiver of search and copying fees, which are acted on by the General Counsel pursuant to delegated authority.

Exempt records include properly classified materials specifically authorized by executive order to be kept secret in the interest of national defense or foreign policy.

Additionally, investigatory records compiled for law enforcement purposes will not be made routinely available for public inspection if that would interfere with enforcement proceedings, deprive a person of a right to a fair trial or an impartial adjudication, constitute an unwarranted invasion of personal privacy, disclose the identity of a confidential source, disclose investigative techniques or procedures, or endanger life or physical safety of law enforcement officials.

From January to December 1984, 219 FOIA requests were received, of which 76 were granted in full, 76 were denied wholly, 55 were granted in part and denied in part, 7 were withdrawn, and 5 remained pending.

Advisory Committees

The Managing Director serves as the Commission's Advisory Committee Management Office (ACMO) with delegated operating responsibility given to the Chief, Management Planning & Program Evaluation Office to ensure compliance with the Federal Advisory Committee Act (P.L. 92-463), the committee management guidelines of the Office of Management and Budget, General Services Administration, and FCC Directive FCCINST 1126.1A.

No advisory committee may meet or take action until a committee charter has been filed and approved by the head of the agency and the Committee Management Secretariat, General Services Administration. The ACMO enforces these provisions and submits reports and analyses of committee operations and efficiency, including the Annual Report to the President.

The Commission's advisory committees cover topics in the areas of satellite broadcasting, emergency and marine telecommunications, common carrier accounting systems, direct broadcast satellite, and other technical subjects. In FY 1984, one advisory committee was terminated:

- Industry Advisory Committee on Technical Standards for the Direct Broadcast Satellite Service

Other committees being sponsored by the FCC as of Sept. 30, 1984 are:

- Telecommunications Industry Advisory Group
- Advisory Committee for the 1985 ITU World Administrative Radio Conference on the Use of the Geostationary-Satellite Orbit and the Planning of the Space Services Utilizing It
- Advisory Committee on Radio Broadcasting
- National Industry Advisory Committee

Information Resources Management

The Commission has used automated data processing (ADP) technology since 1960 and implemented a comprehensive information resources management (IRM) program in the 1970s. ADP technology is being used to provide automated information processing to maintain files of license applications, license holders, and call signs and authorization data to conduct engineering, economic and other analyses, to perform a wide variety of administrative tasks, and to support U.S. delegations at international telecommunications conferences.

Information is submitted to the Commission by the general public, license holders, organizations and others concerning many communications-related topics. The FCC generates an increasing amount of information through its policymaking, licensing, research and enforcement activities that must be considered in new FCC actions. Its IRM program assimilates and synthesizes much of this information and reports it in usable forms for decisionmaking.

The FCC has more than 90 operational computerized systems that process information concerning all areas of the Commission. The agency operates numerous computers: a large general purpose dual processor mainframe, minicomputers for specialized applications and several microcomputers used for office automation. The FCC also contracts for a variety of services from commercial and governmental sources.

During FY 1984 the Honeywell DM-IV data base management system continued to provide improved access to information and support daily queries from users. Work continued on restructuring the Commission's Master Frequency File to provide an on-line data base with query access and update capabilities for all automated licensing systems.

New automated systems were developed to meet the Commission's needs. Extensive changes were made to the Broadcast Applications Processing and Low Power Television Systems to accommodate an influx of 25,000 Low Power Television applications. Formal and Informal Complaints Processing Systems were implemented to improve the Common Carrier Bureau's responsiveness to complaints from the public against communication common carriers. The Field Operations Bureau's Antenna Survey System was completed in FY 1984. It is used to maintain data concerning tower structures and Federal Aviation Administration tower clearance notices. This data is necessary in analyzing applications which involve antennas.

Distributed Processing

The Commission's information resources management (IRM) program is evolving toward a distributed processing environment; a concept in which the user becomes more closely associated with IRM equipment, software and related services in terms of processing capability, system responsibility and physical location of equipment.

Under a distributed concept, unique end-user systems reside on smaller computers. Commercially available software packages can be used as provided or tailored to specific user needs or can be developed by in-house programers or users. Systems and data bases which have Commission-wide application remain on the central-site computer and provisions are made to allow end-users and their unique systems to interface with these central-site systems.

The major benefit of the distributed concept is that it provides Commission personnel with greater access to automation and the ability to develop systems which are more responsive to their needs.

The first steps in the evolution of end-user computing at the FCC were taken with the installation of special purpose minicomputers and office automation microcomputers. The FCC currently has three minicomputers. One is used to support the processing of Low Power Television license applications. Another was acquired for scientific computations used in developing proposals for international telecommunication conferences and to support the highly computational needs of the agency, especially in the area of frequency allocations and modeling. The third minicomputer assists in the automated processing of land mobile license applications at the Private Radio Bureau's Licensing Division in Gettysburg, Pa.

By the end of FY 1984 there were 26 office automation microcomputers distributed throughout FCC headquarters and the Commission's Gettysburg and Laurel Laboratory facilities. With the acquisition of the INFORMIX Relational Data Base Management System, several systems have been successfully implemented on microcomputers including the Commission's Regulatory Review System and an automated version of the FCC rules. In addition, many new administrative systems have been developed for these microcomputers, improving the availability of information needed by managers.

The first two microcomputers for the FCC Field Office Network were installed, and 17 additional microcomputers were purchased in FY 1984 for installation in FY 1985. When completed, this network will permit FCC personnel in the field offices to send data and messages at reduced cost to FCC headquarters and other field offices and provide information processing capabilities in the field. Presently this is accomplished on the central-site computer.

Local Area Network

Associated with distributed processing is the concept of a communications network that provides for interconnection between and among the mainframe computer and the computer systems that are end-user oriented.

A significant development in improving data communications at the FCC will be the installation of a Hyperbus Local Area Network, which will eventually interconnect all of the available computing facilities. A prototype of this network has been installed and tested; it consists of coaxial cables linking terminals, via interface units to the various mainframe, minicomputers, and microcomputers.

DECNET software and hardware have been installed to provide communications between the two VAX 11/780 minicomputers. DECNET enables the machines to share files, programs, electronic mail and peripherals in a highly integrated environment. In addition, a communications link between the Honeywell mainframe and the Low Power Television minicomputer has been installed.

Word Processing and Office Automation

Word processing was initiated at the FCC during the late 1970s with the installation of Vydec and NBI stand-alone work stations. These systems greatly improved clerical productivity and in turn created a demand for additional stations and capabilities. However, as new advances in hardware and software emerged, these stand-alone systems were no longer the most cost effective means of providing word processing. In order to extend word processing to other offices and to provide additional office automation functions, a decision was made in 1982 to purchase multi-user microcomputers which would integrate data processing and word processing.

Office automation software, which includes relational data base management, spread sheet and word processing capabilities, is installed on the distributed multi-user microcomputers serving 132 terminals and 64 printers. In addition, 29 NBI and 8 Vydec stand-alone word processors continue to be utilized effectively.

Electronic Mail System

The Commission has implemented a highly successful Electronic Mail System, which has grown to over 200 subscribers. The system has proven particularly useful in improving communications among the Field Operations Bureau's regional and district offices, as well as the communication of these offices with headquarters.

Publications

Each working day the Office of Congressional and Public Affairs issues a Daily Digest summarizing/listing all material released through that office that day, as well as full length news releases, including notices of Commission activities, listings of staff actions, filings and applications, reports of legal and technical activities and texts of FCC documents.

Rulemaking proceedings, hearing orders, meeting notices and other documents having general applicability and legal effect are published in the *Federal Register* Monday through Friday, except on legal holidays. Volumes of the FCC Rules and Regulations are revised periodically. Various parts are amended when required and several are available in pamphlet form. Current Commission decisions, orders and policy statements are published in monthly issues of *FCC Reports*. All these publications are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

The first series of *FCC Reports* contains 45 volumes, dating from July 1934, when the FCC began operations, to July 1965.

The second series began in July 1965 after a computerized system for compilation and indexing was designed and includes all FCC historical or precedential actions as well as decisions and reports. A cumulative index digest of the first 70 volumes in the second series has been completed.

The first 38 volumes of the first series, while containing all major FCC actions, did omit many documents of considerable value. Volumes 39 through 45 consist of documents issued before July 1965 that had not been published previously and are arranged by general subject matter.

Volume 39 contains frequency allocation matters; Volume 40 consists of sponsorship identification, "equal time" and Fairness Doctrine rulings and FM allocation matters; Volume 41 includes the color television proceeding and TV channel assignments; Volume 42 covers common carrier and private radio matters; and Volumes 43-45 encompass broadcast matters.

The second series includes a comprehensive listing of FCC actions and documents as well as names of main parties of interest, states and localities involved and station call letters. A major portion of the index digest is an abstract of each Commission document printed in the reports, arranged by subject matter under some 5,000 key terms. There are also listings of sections of the Communications Act, and sections of the Commission's rules that have been construed or interpreted in the texts of the decisions contained in each volume. Beginning with Volume 71, a case name index compiled from the indices to the pamphlets is include in each volume.

Personnel

The Commission had 1,939 full-time permanent employees on-board at the close of fiscal year 1984.

Employment Units, Sept. 30, 1984:

Full time permanent employees	Washington, D.C.	Field	Total
Office of Commissioners	36	—	36
Office of Plans and Policy	15	—	15
Office of the Managing Director	297	5	302
Mass Media Bureau	384	—	384
Common Carrier Bureau	314	10	324
Field Operations Bureau	81	344	425
Private Radio Bureau	67	146	213
Office of Science and Technology	116	—	116
Office of General Counsel	61	—	61
Administrative Law Judges	31	—	31
Review Board	10	—	10
Office of Congressional and Public Affairs	19	—	19
Total	1,431	505	1,936

Fee Refund Program

On Dec. 16, 1976, the U.S. Court of Appeals for the District of Columbia Circuit declared the fee schedules used by the Commission since August 1970 to be invalid. Further, the court ordered that refunds be made of amounts in excess of the costs borne by the FCC in providing the service covered by the fee.

The FCC subsequently developed a two-phased program to return a portion of the fees collected by the agency between Aug. 1, 1970 and Dec. 31, 1976. Phase I is limited to those fees which were $20.01 or more; Phase II to fees $20 or less.

The following is a tally of fee refunds by fiscal year:

	Phase-I	Phase-II
FY 1979	$ 61,568	$ —
FY 1980	52,201,136	—
FY 1981	3,688,907	1,237,847
FY 1982	762,415	58,851
FY 1983	613,748	73,776
FY 1984	126,447	20,817

Budget

The following are the sums appropriated by Congress for operation of the FCC, 1970-1984:

1970	$24,561,000
1971	26,844,000
1972	31,969,000
1973	34,173,000
1974	40,155,000
1975	46,900,000
1976	51,163,000
1977	56,911,000
1978	64,550,000
1979	70,466,000
1980	76,047,000
1981	80,363,000
1982	79,900,000
1983	82,917,000
1984	88,983,000

Legislation Enacted

During fiscal year 1984, Congress enacted the following laws affecting the Federal Communications Commission:

P.L. 98-111, the "Radio Broadcasting to Cuba Act" (Radio Marti) signed Oct. 4, 1983, requiring the Commission to make determinations of damages to AM stations in the United States caused by interference from Cuban stations.

P.L. 98-166, signed Nov. 28, 1983, appropriated $86,383,000 for the Commission in FY 84.

P.L. 98-214, the "Federal Communications Commission Authorization Act of 1983" signed Dec. 8, 1983. Authorized $91,156,000 to be appropriated in fiscal 1984 and 1985 and made a number of other changes: (1) amended Section 316 of the Act to permit the FCC to make minor modifications to a radio station license or permit without the necessity of holding a hearing; (2) amended Section 503(b)(5) of the Act to clarify than the Commission has the authority to levy forfeitures against violators in radio services for which an individual license is not required, e.g., citizens band and radio control devices; (3) added Subsection 310(e) to the Act to clarify the Commission's regional concentration rules for broadcast stations; (4) supplemented Section 223 of the Act to prohibit obscene telephone messages regardless of who initiated the call, if convened for commercial purposes and without the person's consent or to a minor; (5) required the FCC to establish a plan to ensure that needs of public safety authorities are taken into account in spectrum allocations; (6) amended Section 4 of the Act to allow the Commission to permit recognized industry groups to implement a comparable substitute to the current technical licensing service; (7) allowed volunteers who administer radio operator exams to charge for out-of-pocket expenses; (8) added Section 7 to the Act to require the FCC to act within one year on petitions to authorize new technologies; and (9) required U.S. delegations to ITU radio conferences to include at least three vice chairpersons—from the State Department, Commerce Department and FCC.

P.L. 98-936 (Supplementary Appropriations) signed Aug. 22, 1984, placed a moratorium on implementation of the television portion of the Commission's "12-station rule."

P.L. 98-411 signed Aug. 30, 1984. Appropriated $93,611,000 for the Commission for FY 1985.

Legislative Program

During fiscal year 1984 the FCC resubmitted to the Congress two legislative proposals that had been submitted in FY 83. These were (1) to amend Section 316 of the Act to permit the Commission to make minor modifications to a radio station license or permit without the necessity of holding a hearing, and (2) to amend Section 503(b)(5) of the Act to clarify that the Commission has authority to levy forfeitures against violators in radio services for which an individual license is not required. Both of these amendments were enacted into law with the signing of P.L. 98-214 on Dec. 8, 1983.

The Commission began implementing provisions of P.L. 98-111 and P.L. 98-214 by adopting orders and rules on (1) interference criteria of Cuban broadcasting, (2) restrictions of hours on recorded "obscene" phone messages, and (3) use of volunteer examiners for the amateur service.

Bills Affecting the FCC

The Commissioners and FCC staff testified on a number of legislative matters pending before Congress during the fiscal year, including:

- Broadcast deregulation
- Financial interest and syndication rule

- First amendment rights for the electronic media
- Extension of broadcast hours for daytime only AM stations
- International satellite issues
- Small business access charges
- Subliminal communications technology
- The "7" station rule
- Radio Marti
- International copyright reciprocity
- Federal Privacy and Telephone Records Act
- Expendable Launch Vehicle Commercialization Act
- Relationship of the Privacy and Freedom of Information Acts
- Cable legislation
- Cable pornography

Litigation

General

The Commission participated in 251 federal appeals and Supreme Court proceedings during the fiscal year. Of these, 38 were affirmed, 5 affirmed, remanded or vacated in part, 4 reversed or remanded, and 97 dismissed.

At the end of the fiscal year, 102 appellate and Supreme Court cases were pending; this compares with 81 at the start of the year.

The Commission also participated in 64 federal district court cases during the year.

At the end of the fiscal year, 47 district court cases were pending; this compares with 29 at the start of the year.

Decisions of Special Interest

1. *Black Citizens for a Fair Media v. FCC*, 719 F.2d 407 (D.C. Cir. 1983). The District of Columbia Circuit Court of Appeals upheld the FCC's adoption of a simplified, so-called "post card" renewal form for radio and television broadcast licensees. The agency had concluded after a rulemaking that the previous form posed an unnecessary administrative burden on both the agency and its licensees by eliciting much information unnecessary for discharge of its regulatory responsibilities. The Commission stated that it could maintain effective supervision through (1) the post card renewal form, (2) random occasional use of the old long form, (3) the maintenance of public information files by the licensees, (4) random on-sight inspections, and (5) investigation of charges of licensee misconduct.

2. *Capital Cities Cable, Inc. v. Crisp*, 104 S. Ct. 2694 (1984). The Supreme Court held that the State of Oklahoma could not require cable television operators in Oklahoma to delete all advertisements for alcoholic beverages contained in out-of-state signals, both broadcast and non-broadcast, carried on their systems. The Court held that the FCC's comprehensive authority under the Communications Act to regulate cable television included the power to take all actions necessary to fulfill its statutory responsibilities, and that the agency had properly exercised this authority when it preempted any state or local regulation. The Court also found that the Oklahoma advertising ban conflicted with the FCC rules requiring cable systems to carry certain broadcast signals and prohibiting the deletion of any portion of retransmitted broadcast signals, including advertisements. The advertising ban, according to the Court, also undermined both the FCC's policies encouraging cable systems to offer a diverse range of programing and the compulsory licensing scheme established by the Copyright Revision Act of 1976. The Court rejected Oklahoma's argument that its advertising ban should not be preempted by federal regulation since it was adopted pursuant to the State's power under the 21st amendment to regulate intoxicating liquor.

3. *FCC v. ITT World Communications Inc.*, 104 S. Ct. 1936 (1984). The Court held that the Commission's "Consultative Process" meetings with representatives of foreign countries were not subject to the Government in Sunshine Act because the meetings could not lawfully "determine or result in the joint conduct of official agency business" within the meaning of the Act since they were not convened by the FCC and were not subject

to the agency's unilateral control. The Court also found that exclusive jurisdiction to review final orders of the Commission lay in the courts of appeals and that litigants may not evade this exclusive jurisdiction by presenting arguments to a district court that could have first been presented to the Commission and then, if unsuccessful, to an appellate court.

4. *FCC v. League of Women Voters of California*, 104 S. Ct. 3106 (1984). The Court held that Section 399 of the Act, which banned editorializing by any public broadcasting station that received federal funds from the Corporation for Public Broadcasting, was unconstitutional because it violated the first amendment. The Court found that the ban was overly broad and did not rationally further any substantial governmental interest.

5. *National Association of Broadcasters v. FCC*, 740 F.2d 1190 (D.C. Cir. 1984). The major portion of the Commission's interim rules for the new Direct Broadcast Satellite (DBS) Service were upheld in this case. Specifically, the court held that the Commission had authority to approve a broadcast service which is not tied to a local community and acted reasonably when it did not limit, during the early stage of DBS, the number of channels which could be licensed to a DBS operator for service to a common area. The court also affirmed the decision to grant DBS priority in the 12.2-12.7 GHz band with the caveat that the Commission has a continuing duty to ensure that DBS does not threaten public safety radio services currently operating in this band. The court vacated the FCC's order to the extent that the agency had not proposed to require those DBS systems operating as common carriers to comply with the broadcast restrictions of Title III of the Act. The court upheld in its entirety the FCC's grant of an application by Satellite Television Corporation (STC), a subsidiary of the Communications Satellite Corporation, to construct a DBS system. The court found that the Commission was not required to complete a DBS rulemaking before considering STC's application, nor was the agency compelled to hold an evidentiary hearing to determine the economic impact of a grant of STC's application on the existing terrestrial broadcasting system.

6. *ITT World Communications Inc. v. FCC*, 725 F.2d 732 (D.C. Cir. 1984). The appellate court set aside the FCC's "authorized user" decision which had permitted the Communications Satellite Corporation (Comsat) to offer service directly to the public under certain conditions. Comsat traditionally, and as a matter of FCC policy, had been confined to serve as a "carriers' carrier." The court said that the Commission should not have decided the matter of Comsat's entry into retail service without also deciding on "related" matters dealing with ownership of earth stations and direct access by international carriers to the Intelsat communications system. The court remanded the authorized user question to the FCC for further consideration in the light of actions the Commission was considering with respect to those related matters.

7. *Wold Communications, Inc. v. FCC*, 735 F.2d 1465 (D.C. Cir. 1984). The court of appeals affirmed the Commisison's decision to allow satellite system licensees to "sell" some transponders on their systems on a noncommon carrier basis. The court held that it was a reasonable exercise of the agency's discretion to allow this business arrangement for the provision of communications facilities, particularly where the sale of a limited number of transponders for private use would leave adequate supplies of transponders on other satellites for availability to the public on a common carrier basis.

8. *National Association of Regulatory Utility Commissioners v. FCC*, 737 F.2d 1095 (D.C. Cir. 1984), cert. pending, No. 84-95, et al. The appellate court affirmed the FCC's important "access decision" in most respects. The agency's decision will enable local telephone companies to recover their interstate costs through a new system of charges to end users and interexchange carriers. The access system, designed to take account of new competitive and technological developments, imposes some costs directly on all telephone subscribers and sets carrier charges that give a discount to carriers other

than the American Telephone and Telegraph Company in recognition of the higher quality of AT&T's current interconnections. The new system also requires some communications users to contribute for the first time to interstate costs that they had avoided under the old system. The court affirmed the decision in most respects, holding that the FCC had acted rationally and responsibly to resolve problems that had to be dealt with in the changing communications environment. The end user charge, in particular, was held to be within the FCC's jurisdiction because it recovers interstate costs and is imposed on ratepayers who obtain access to the interstate system through their telephone lines.

9. *Virginia State Corporation Commission v. FCC*, 737 F.2d 388 (4th Cir. 1984), appeal and cert. pending, No. 84-871, et al. The court of appeals affirmed the Commission's declaration that its prescription of depreciation rates and practices for telephone companies had preemptive effect and that state regulatory agencies were bound to honor those rates and practices in their own ratemaking proceedings. The court held that the FCC's own depreciation policies and rules were within its authority, and that it was reasonable for the agency in the circumstances of this case to determine that state refusals to follow those policies would interfere with a legitimate federal purpose. The FCC's depreciation policies were based on its perception of a need to permit telephone companies to compete effectively in communications markets. If those policies were not allowed in the states, the federal purpose could be frustrated because both interstate and intrastate ratemaking governs the recovery of investment in the same plant.

Other Decisions

In addition to the preceding decisions of special interest, the following cases were decided during fiscal 1984:

1. *Kansas State Network v. FCC*, No. 82-1319, dec. 10/25/83, 720 F.2d 185 (D.C. Cir.).
2. *Victor Broadcasting, Inc. v. FCC*, No. 82-1964, dec. 11/22/83, 722 F.2d 756 (D.C. Cir.).
3. *Anibal Sotomayor v. FCC*, No. 83-1173, dec. 11/22/83, 721 F.2d 1408 (D.C. Cir.).
4. *National Association of Regulatory Utility Commissioners, et al. v. FCC*, Nos. 81-1556, et al., dec. 2/17/84, 727 F.2d 1212 (D.C. Cir.).
5. *Multi-State Communications, Inc. v. FCC*, No. 83-1296, dec. 3/6/84, 728 F.2d 1519 (D.C. Cir.).
6. *Western Union Telegraph Company v. FCC & USA*, No. 82-1502, dec. 3/7/84, 729 F.2d 811 (D.C. Cir.).
7. *Quincy Cable TV, Inc. v. FCC & USA*, No. 83-1283, dec. 3/30/84, 730 F.2d 1549 (D.C. Cir.).
8. *Cleveland Television Corporation v. FCC*, No. 83-1659, dec. 4/20/84, 732 F.2d 962 (D.C. Cir.).
9. *West Michigan Broadcasting Company v. FCC*, No. 82-2513, dec. 5/25/84, 735 F.2d 601 (D.C. Cir.).
10. *Committee for Community Access v. FCC*, No. 82-2314, dec. 6/15/84, 737 F.2d 74 (D.C. Cir.).
11. *Gloria Mendez vda. de Perez, et al. v. FCC*, Nos. 79-1614, et al., dec. 6/26/84, 738 F.2d 1304 (D.C. Cir.).
12. *MCI Cellular Telephone Company v. FCC*, No. 83-1408 and *Gencom Incorporated v. FCC*, No. 83-1720, dec. 6/29/84, 738 F.2d 1322 (D.C. Cir.) (consolidated for disposition only).
13. *All America Cables and Radio, Inc. v. FCC*, No. 83-1252, dec. 6/15/84, 736 F.2d 752 (D.C. Cir.).
14. *United States Satellite Broadcasting Company v. FCC*, No. 83-1692, dec. 7/24/84, 740 F.2d 1177 (D.C. Cir.).
15. *Neighborhood TV Company, Inc. v. FCC & USA*, No. 83-1635, dec. 8/17/84, 742 F.2d 629 (D.C. Cir.).
16. *P & R Temmer d/b/a Mobile Communications Service Company v. FCC*, No. 83-1580 and *AAT Electronics Corporation v. FCC*, No. 83-1657, dec. 9/14/84, 743 F.2d 918 (D.C. Cir.) (consolidated for disposition only).

17. *City of New York Municipal Broadcasting System (WNYC) v. FCC,* No. 83-1663, dec. 9/21/84, 744 F.2d 827 (D.C. Cir.).
18. *City of Angels Broadcasting, Inc. v. FCC,* No. 83-1741, dec. 9/28/84, 745 F.2d 656 (D.C. Cir.).
19. *Fort Mill Telephone Company v. FCC & USA,* No. 82-1255, dec. 10/18/83, 719 F.2d 89 (4th Cir.).
20. *Greater Los Angeles Council on Deafness, Inc., et al. v. Community Television of Southern California, et al.* and *Department of Education, et al.,* dec. 11/2/83, 719 F.2d 1017 (9th Cir.).
21. *California Association of Physically Handicapped, Inc. v. FCC & USA,* Nos. 80-6088, et al., dec. 12/8/83, 721 F.2d 667 (9th Cir.).
22. *Henry W. Maier v. FCC & USA,* No. 83-1737, dec. 5/8/84, 735 F.2d 220 (7th Cir.).
23. *Illinois Bell Telephone Company, et al. v. FCC & USA,* Nos. 84-1145, et al., dec. 6/29/84, 740 F.2d 465 (7th Cir.).
24. *National Black Media Coalition v. FCC,* No. 82-2442, aff'd by Judgment 10/21/83 (D.C. Cir.).
25. *Ralph C. Wilson Industries, Inc. v. FCC & USA,* Nos. 82-2161, aff'd by Judgment 11/1/83 (D.C. Cir.).
26. *David Williams d/b/a Industrial Communications v. FCC,* No. 83-1233, aff'd by Judgment 11/30/83 (D.C. Cir.).
27. *Ettlinger Broadcasting Corporation v. FCC,* No. 83-1331, affirmed by Judgment 12/28/83 (D.C. Cir.).
28. *National Association of Regulatory Utility Commissioners v. FCC & USA,* No. 83-1485, aff'd by Judgment 1/17/84 (D.C. Cir.).
29. *U.S. Telephone Communications, Inc. v. FCC & USA,* No. 82-2324, aff'd by Judgment 1/13/84 (D.C. Cir.).
30. *League of Women Voters Education Fund v. FCC & USA,* No. 83-2194, aff'd by Judgment 3/8/84 (D.C. Cir.).
31. *RCA American Communications, Inc. v. FCC & USA,* Nos. 81-1558, et al., aff'd by Judgment 3/8/84 (D.C. Cir.).
32. *WCOV, Inc., Montgomery Independent Telecasters, Inc. v. FCC,* No. 83-1557, aff'd by Judgment 3/1/84 (D.C. Cir.).
33. *WCCO Radio, Inc. v. FCC,* No. 83-1670, aff'd by Judgment 3/23/84 (D.C. Cir.).
34. *American Security Council v. FCC & USA,* No. 83-1840, aff'd by Judgment 4/20/84 (D.C. Cir.).
35. *GTE Sprint Communications Corporation v. FCC & USA,* No. 83-1606, aff'd by Judgment 4/18/84 (D.C. Cir.).
36. *Alaskans for Better Media v. FCC,* No. 82-2144, aff'd by Judgment 5/16/84 (D.C. Cir.).
37. *Rancocas Valley Broadcasting Company, Inc. v. FCC,* No. 83-2119, aff'd by Judgment 5/25/84 (D.C. Cir.).
38. *Anthony R. Martin-Trigona, WHET, Inc. v. FCC,* No. 83-1579, summarily affirmed by Court Order 8/16/84 on FCC's motion (D.C. Cir.).
39. *Anthony R. Martin-Trigona, WHET, Inc. v. FCC,* No. 83-1733, summarily affirmed by Court Order 8/16/84 on FCC's motion (D.C. Cir.).
40. *Anthony R. Martin-Trigona v. FCC,* No. 83-1844, summarily affirmed by Court Order 8/16/84 on FCC's motion (D.C. Cir.).

Status of Litigation

	Supreme Court	C.A.D.C.	Other	Total
Cases pending Sept. 30, 1983	6	66	9	81
Cases filed FY 1984	6	149	9	170
Grand Total	12	215	24	251
Affirmed	2	31	5	38
Affirmed in part/remanded or vacated in part	—	4	1	5
Reversed/remanded	1	3	—	4
Cert. denied	5	—	—	5
Cert. granted	2	—	—	2
Dismissed, consolidated, etc.	—	90	7	97
Cases pending Sept. 30, 1984	4	87	11	102

U.S. DISTRICT COURTS		
Cases pending Sept. 30, 1983	29	
Cases filed FY 1984	35	
		(includes 28 regular cases; 7 forfeitures)
Cases Terminated in FY 1984	17	
Cases pending Sept. 30, 1994	47	

General

The Office of Plans and Policy (OPP) serves as a major economic/technical policy adviser to the Commission by analyzing agenda items and developing long-term policy planning. The office produces a working paper series on major policy issues and also manages the agency's policy research program.

Staff Reports/Studies and Working Paper Series

Staff reports and studies prepared by OPP staff include: "The Effects of Higher Telephone Prices on Universal Service;" "Statistical Evidence of Substitutability Among Video Delivery Systems;" "Divestiture and the Separate Subsidiary Requirement;" "Regulatory Underbrush—Elimination of Unnecessary Broadcast Regulations;" and "Bypass of the Local Exchange: A Quantitative Assessment."

Agenda Preparation and Review

OPP worked closely with other bureaus and offices on major policy agenda items, to ensure increased competition in the telecommunications industry, removal of barriers to entry, and more economic use of spectrum. These items included: access charge decisions; AT&T's Private Line Tariffs; measurement of market power; separate subsidiary for AT&T; alternative end user charge options; economics of optional calling plans; direct access to Intelsat for international service carriers and the 7-7-7 station rulemaking.

Specific Projects

"The Effects of Higher Telephone Prices on Universal Service"

This paper addressed the question of whether recent pricing reforms undertaken by the FCC threatened "universal" telephone service. The paper provided historical background on the universal service policy goal and examined conceptual issues surrounding the definition of universal and possible economic rationales for government intervention to bring it about. It also analyzed demand for telephone access and surveyed recent econometric evidence on the sensitivity of demand to changes in prices and other demand-influencing factors. It reviewed the price changes expected from implementing a system of flat access charges to cover non-traffic sensitive costs of providing telephone service. Policy issues were considered and alternative means for mitigating any adverse effects that might occur by implementing an access charge system were examined.

"Statistical Evidence of Substitutability Among Video Delivery Systems"

This paper estimated demand equations for videocassette recorders (VCRs) and cable television. It compared the substitution among cable, broadcast television and VCRs. The results suggested that VCRs and cable are substitutes, VCRs and broadcast television are complements (i.e., that their use rises and falls together), and cable and broadcast television are substitutes. The study also analyzed the complexity of VCR use, showing that in some circumstances, it may be used as a substitute for and in others as a complement to the same alternative delivery system.

"Divestiture of AT&T and Separate Subsidiary Requirement"

The Computer II separate subsidiary requirement, in light of the divestiture of the local operating companies from AT&T, was examined in this working paper. The 1980 Computer II decision allowed AT&T to participate fully in unregulated, competitive markets for the first time since 1956, but imposed a separate subsidiary requirement to prevent AT&T from using its monopoly power in regulated markets to undermine competition in unregulated markets.

Two major abuses were feared: tying the purchase of competitively supplied products and services to the purchase of monopoly services, and cross-subsidizing competitive activities with revenues from regulated ones in order to underprice competitors in the unregulated market and raise rates in the regulated market.

The report pointed out that other FCC regulations and court decisions have prevented tying, and that divestiture and increasing competition may have eliminated AT&T's ability to raise rates to cross-subsidize competitive services. These changes made the Computer II requirement unnecessary, or at least excessively restrictive, according to the study. At the same time the requirement imposed costs on society by making AT&T's provision of services less efficient and might make it more difficult for AT&T to compete with companies that do not face the requirement. The study concluded that the costs of the Computer II requirement might outweigh the benefits.

Broadcast "Underbrush"

In 1983 the Commission initiated its broadcast "underbrush" proceeding in MM Docket 83-842, "Elimination of Unnecessary Broadcast Regulation." "Underbrush" is the accumulation of Commission policies, rules, etc., which have grown up around major regulations (and broadcast licensees) over the years and which have the potential to impede the competitive functioning of the marketplace. Such matters are reviewed to eliminate those which are no longer justified and not required. This project is being conducted by OPP, in cooperation with the Mass Media Bureau.

In August 1984 the agency eliminated three Commission policies which had severely limited horse race programing and advertising on radio and television. Future actions in this proceeding will focus on policies dealing with broadcast business practices.

"Bypass of the Local Exchange: A Quantitative Assessment"

This paper examined the effect of usage-based access charges on the incentive to bypass the switched access services of the local exchange carriers. Interexchange carriers currently pay $.085 per minute to the originating and the terminating local exchange carrier for premium access service. A substantial portion of the $14.5 billion raised by that fee represents a transfer to local carriers which is used to reduce local rates for basic services. The FCC has been concerned that the fee could induce carriers or large customers to find alternative methods of distributing calls between the customer location and the interexchange carriers' premises, thus avoiding the access fee by bypassing the local carrier.

The report developed an economic model of the market for access to interexchange carriers and used the model to compute the amount of bypass which would occur at a given level of access charges. Alternatives to switched access included privately constructed facilities between the customer location and the interexchange carrier (such as private microwave or coaxial cable) and private line service provided by the local exchange carriers. The report concluded that bypass would lead to a 70 percent increase in the current non-traffic sensitive charges for interexchange access and that the current revenue requirement could continue to be generated after all customers with an incentive to bypass the local exchange carriers have done so.

(This paper was incorporated into the Commission's official bypass report adopted in December 1984.)

Contract Research

Budget constraints prohibited the initiation of any new policy research programs in FY 1984.

One of the propagation studies for which the Commission invested funds to develop and procure instrumentation from data gathering continued. It is planned that additional data will be collected as future funds become available.

Alaska Propagation Study

The research contract with the University of Alaska to perform high latitude field strength measurements of Standard Broadcast (AM) band transmissions was extended by $50,000. The Alaska Propagation Study was initiated to overcome a lack of high latitude skywave propagation data for the medium frequency (MF) band. The MF band contains the frequencies used for standard AM broadcasting in addition to other radio services. This propagation study has been in progress for about three years.

The purpose of extending the research is to continue the acquisition of high latitude MF field strength data further into the present sun-spot cycle. Skywave propagation is very much influenced by the 11-year sun spot cycle. Thus, it is desirable to continue the measurement program at least through the low of the current cycle which is expected in 1987. The most immediate application of the field strength data will be to determine whether Commission rules unduly restrict Alaskan AM broadcast service.

General

Reliable communications during peacetime or wartime emergencies is one of the Commission's major concerns. Emergency plans and systems for broadcast, private radio and common carrier services are developed by the FCC with the assistance of the National Industry Advisory Committee (NIAC).

NIAC

NIAC is made up of representatives of industry and user groups with extensive knowledge of broadcast, common carrier and private radio communications capabilities. It consists of an Executive Committee, a Long Range Planning Committee and three subcommittees: Emergency Broadcast, Common Carrier Communications and Radio Communications. The NIAC charter was renewed for an additional 2-year term beginning July 26, 1984.

To ensure that national security and emergency preparedness matters receive appropriate attention, the Long Range Planning Committee is made up of senior corporate officials from a cross section of the major communications and broadcast industries in the United States. There were 90 NIAC members at the end of FY 1984.

NIAC conducted five meetings during the past fiscal year. They were devoted mainly to a review of FCC emergency communications planning activities and the feasibility of transferring selected functions in this area to the Federal Emergency Management Agency (FEMA).

The national readiness posture of the Emergency Broadcast System (EBS) was improved through semi-random closed circuit tests (CCTs) initiated by the Emergency Broadcast Committee. Participants in the CCTs are no longer told the exact date and time of the tests.

Priorities for the restoration of private line communications services provided by common carriers are certified by the Commission. The current system of assigning priorities, which applies both to government and industrial services and which was developed in cooperation with the Executive Office of the President, became effective Mar. 31, 1981.

Priorities are certified to both the user and the common carrier providing the service. At the end of FY 1984 there were approximately 17,000 Federal Government priorities and 750 for other users.

Private Radio Services Emergency Plans

The Commission continued to approve and process emergency plans and plan modifications and to issue licenses in the Local Government Radio Service under a program entitled Operation SECURE (State Emergency Capability for the Use of Radio Effectively). These plans provide for the use of high-frequency radio spectrum by state governments during disasters and emergencies. In order to assist licensees further in maintaining a high state of preparedness, the FCC extended from 60 to 420 minutes per week the maximum testing time allowed by Operation SECURE stations.

Emergency Broadcast System (EBS)

Background

The EBS emergency communications system was developed primarily to be used by the President in times of national crisis or war. EBS facilities, procedures and interconnecting systems may also be used by state and local officials in the 50 states, the District of Columbia, Puerto Rico, the

Virgin Islands, American Somoa and Guam for emergency situations involving a threat to the safety of life or property.

The EBS, which can be activated nationally only by the White House, is designed to enable the President to speak to the nation within 8 minutes of his request. This request initiates the transmission of an Emergency Action Notification (EAN)—an announcement to all broadcast stations and participating nongovernment entities that the system is being activated. Broadcast licensees, commercial radio and TV networks and other nongovernment communications services regulated by the FCC voluntarily participate in EBS activities.

State Emergency Communications Committees (SECCs), appointed by the FCC, coordinate EBS activities with state and local officials and the broadcast industry. The SECCs and their local subcommittees—the Operational Area Emergency Communications Committees—made substantial progress toward developing detailed state and local EBS plans.

EBS and State and Local Needs

The FCC, NIAC, the National Oceanic and Atmospheric Administration, National Weather Service and FEMA continued to participate in an agreement signed in June 1976, and updated in June 1982, which provides guidance for a joint effort to promote the development of detailed operational procedures to use the EBS during day-to-day state and local emergencies. These procedures complemented existing EBS operations in national emergencies.

Thirty-six states and 433 of 576 EBS operational areas have developed final EBS plans. The Commission received over 5,500 (more than 1,000 in 1984) reports from stations on the use of the EBS for emergencies since the program began in 1976.

During FY 1984, the FCC and FEMA continued to work with common carriers on the pending upgrade of the EBS "500" Teletypewriter Network—used to alert the major radio and TV networks, wire services and common carriers to standby for a Presidential message. The existing "500" Net equipment is scheduled for replacement in FY 1985.

Last year, the Commission processed 14 Equipment Loan Agreements under the Broadcast Station Protection Program. This joint FCC/FEMA program provides for loans of government equipment to key EBS stations to enable them to operate effectively during a national, state or local emergency.

National Security and Emergency Preparedness (NSEP) Activities

During the past year the FCC continued, on a limited basis, to participate in the activities of the Emergency Mobilization Preparedness Board (EMPB), an interagency group established to develop effective procedures for civilian and military mobilization.

Additionally, the Commission also participated actively in a FEMA Subcommittee for a Federal Response to a Catastrophic Earthquake, including that group's RESPONSE 84 Earthquake Exercise. Further, the FCC was represented on the National Communications System (NCS) Council composed of federal agencies concerned with NSEP matters.

Early in 1984, the Federal Government conducted its annual full-scale civil mobilization exercise—REX 84 ALPHA. Again, Commission involvement in pre-exercise planning, on-site exercise participation and post-exercise evaluation was extensive.

As part of the FCC's internal NSEP activities, the staff completed the agency's Continuity of Government Plan and began training key personnel in the procedures described in the plan. In conjunction with this activity, the staff also conducted a detailed study of the Commission's current emergency relocation facilities.

The Commission will continue its significant involvement in all types of NSEP activities during FY 85.

General

The FCC is empowered by the Communications Act of 1934 to license and regulate broadcast stations to serve "the public interest, convenience and necessity." The Act not only requires the Commission to determine whether the grant or renewal of a broadcast license will serve the public interest, but also to assign a frequency (wavelength) and a set of call letters to each station, and to specify operating power and hours of operation.

The agency, in March 1966, established rules requiring all cable systems to carry local station programs and those of distant stations imported by the cable system. The rules prohibit the importation of distant signals into the major television markets without a hearing on the probable impact on local broadcasting. Ten years later, in March 1972, the Commission established the Cable Television and Cable Television Relay Services.

Many of the cable rules have been modified or eliminated since 1972. Among the more significant actions were deletion of most of the franchise standards in 1977; substitution of a signal registration process for the certificate of compliance application process in 1978; and elimination of the distant signal carriage restrictions and syndicated program exclusivity rules in 1980.

The Broadcast and Cable Television Bureaus were consolidated by the Commission on Nov. 30, 1982, to form a new Mass Media Bureau. The bureau provides a single, integrated organizational structure for administering Commission policies regarding traditional broadcasting, cable television and emerging video technology.

Authorization of service is the Commission's top priority, emphasizing the emerging technologies for the delivery of video services, including cable, low power television, subscription television and direct broadcast satellite, along with traditional television stations. The American public is well served when it has a variety of broadcast sources for news, information and entertainment. For that reason, the FCC is prohibited from censoring program material and is required to ensure that programing serves all segments of the community. The latter is accomplished through requirements for equitable employment practices and through various policies to encourage minority ownership. In 1982, the agency adopted a new policy statement strengthening its commitment to minority ownership.

The Commission licenses both commercial and noncommercial stations. At the end of fiscal year 1984, 16,788 broadcast stations were on the air, as follows:

AM Radio	4,754
FM Radio (Commercial)	3,658
FM Radio (Educational)	1,165
FM Translators & Boosters	895
UHF-TV (Commercial)	358
VHF-TV (Commercial)	535
UHF-TV (Educational)	173
VHF-TV (Educational)	114
UHF-TV Translators	1,924
VHF-TV Translators	2,908
UHF-TV Low Power	102
VHF-TV Low Power	202
Total Radio	10,472
Total TV	6,316

During FY 1984, the Mass Media Bureau continued the trend toward reducing government regulation. This included deregulation of television and revisions in the Commission's multiple ownership rules. At the same time, the bureau sought to provide the American public with more broadcast service, through increased nighttime power for Class IV AM stations, authorization of multichannel sound for television, and by allocating additional FM channels.

Policy and Rule Changes

Deregulation of Commercial Television

On June 27, 1984, in MM Docket 84-231, the Commission took a significant step toward deregulating commercial TV by eliminating programing guidelines, ascertainment requirements, commercial rules and policies and program log requirements.

Concluding that current programing guidelines relating to the routine review of program performance in uncontested renewal proceedings were unnecessary, the agency noted the only nonstatutory programing obligation of a licensee should be to discuss issues of concern to its community of license. Accordingly, a commercial TV broadcaster will remain subject to the obligation to provide programing that is responsive to the issues confronting its community. Moreover, licensees may look to the programing of other TV stations, both commercial and noncommercial, in selecting those issues they will address in their programing.

The Commission will no longer request ascertainment documentation, the benefits of which do not justify the costs. Thus, in all future proceedings the focus of FCC inquiry will be on the responsiveness of a licensee's programing and not the methodology used in arriving at those decisions.

The Commission concluded that the best method of documentation suitable to its new regulatory scheme for commercial TV broadcasting is a quarterly issues/programs list to be placed in a station's public inspection file. The list should contain at least 5-10 issues to which the licensee gave particular attention with respect to programing over the past three months and a statement on how each issue was treated.

Turning to commercialization, the FCC noted that marketplace forces can better determine appropriate levels than can the Commission's rules. Therefore, commercialization levels will no longer be considered in processing uncontested renewal applications, nor will petitions to deny based on allegations of overcommercialization be entertained. In addition, the ban on program-length commercials was rescinded.

The Commission eliminated the long form renewal audit of commercial TV licensees (FCC Form 303-C). However, it cautioned that its Field Operations Bureau will continue to conduct random technical inspections and check the public inspection files of commercial TV stations for completeness.

Deregulation of Subscription Television (STV)

On Oct. 19, 1983, in Docket 21502, the Commission relaxed the stringent TV technical standards pertaining to reception of subscription television (STV) signals. It was concluded that the marketplace could govern this matter in a satisfactory fashion. If a subscriber were dissatisfied with his reception, he could be expected to discontinue his subscription. This action could stimulate entry into the STV industry by reducing costs for potential entrants.

Submission of operating, programing and financial information by STV applicants also was eliminated. The agency concluded that the time-consuming application process for STV authorizations served no useful purpose since that process not only imposed burdens on both applicants and the Commission, it delayed service to the public. STV applicants are thus only required to identify the STV system to be used and indicate that the system had been approved by the Commission.

Rather than requiring a specific application for STV authorization to provide this minimal information, the Commission devised a simpler procedure. Any licensee of a commercial TV station or holder of a construction permit for a new commercial TV station who desires to commence subscription operations may do so by sending a "Notice of Commencement of STV Operation" to the FCC within 10 days of beginning of operations indicating that date and identifying the encoding system.

Children's Television

On Dec. 22, 1983, in Docket 19142, the Commission decided not to adopt new requirements regarding programing for children. Given the totality of video programing sources and their offerings for children, constitutional concerns regarding interference with the exercise of a licensee's programing discretion, and regulatory anomalies that often result from inflexible standards, the agency concluded that specific quantification rules and renewal guidelines were undesirable.

In recognition of the important role of television in a child's life, the FCC decided to continue to recognize the obligation of broadcasters to serve this portion of the audience. The broadcasters' public service obligation includes a responsibility to provide diversified programing designed to meet the varied needs and interests of the child audience. However, a licensee may consider the other children's program services available in its market in executing its response to those needs.

Deregulation of Radio

On Mar. 1, 1984, in BC Docket 79-219, the Commission again determined that an issues/programs list rather than a program log was adequate documentation of a commercial radio licensee's compliance with its duty to provide issue-responsive programing. The issues/programs list technique is best equipped to elicit the kind of purposeful programing information relevant to the FCC's current regulatory concerns.

However, since the annual issues/programs list required in this proceeding might be an inadequate record of the programing broadcast in response to community issues, the Commission mandated a quarterly filing without the prior limitation on how many issues may be listed. The additional burden imposed by an expanded issues/programs list requirement is limited in scope and warranted in view of the U.S. Court of Appeals' concerns that adequate information be available to the public and the Commission for review of a radio licensee's issue-responsive programing.

Loud Commercials

Noting that the industry (CBS Inc., in particular) recently developed the technology necessary to help control loud commercials, the FCC terminated its inquiry into this matter. Studies have shown that one's personal reactions to a product may influence the relative perception of loudness in a commercial. Although technology cannot control reactions due to personal biases, it can help to detect and control actual audio processing that was intended to increase loudness.

TV Multichannel Sound

The FCC has authorized TV stations to transmit with multichannel sound, including stereophonic and bilingual programing. It also opened uses of the aural baseband to other areas such as common carrier or private radio services. Although the final rules do not specify a particular method of multichannel transmissions, they do endorse the industry-developed BTSC system.

In a similar action, the Commission authorized the operation of ancillary telecommunications services on the vertical blanking interval (VBI) of the television video signal. The teletext authority provided in BC Docket 81-741 was expanded to permit the television VBI to be used for additional services such as data transmission, computer software delivery, and paging. The new authority provides licensees with full discretion to determine the services transmitted on their VBI facilities and is not bound by a definitional constraint that limits VBI use to a particular kind of service.

The Commission found that the expanded authority would provide new opportunities for enlarging and enhancing service on TV frequencies and thereby would encourage more efficient use of these resources.

Attribution

On Mar. 29, 1984, in MM Docket 83-46, the Commission made a number of revisions to the standards governing the means by which it attributes interest in broadcast, cable television and newspaper properties and to the manner in which these interests are reported.

The attribution of ownership limit was raised from 1 to 5 percent for most investors and from 5 to 10 percent for specified passive investors. Thus, ownership interests of less than the new percentages would not be considered in the application of the Commission's ownership rules. In addition, the Commission determined that nonvoting stock, whether or not convertible to voting stock, warrants, debentures and other convertible interests, and debt and lease back arrangements would not be attributed to the owner.

With respect to trusts, the Commission determined that attribution would be evaluated on a case-by-case basis but specified the criteria which would be used in making such evaluations. It generally reaffirmed that officers and directors would be attributed interests in their licensees, but established a mechanism whereby officers and directors who are neither directly nor indirectly involved in the activities of the broadcast licensee can be relieved of this interest. Standards were established to permit certain limited partnership interests to be exempt from attribution, and modifications were made to the requirements relating to the reporting of attributable interests.

Regional Concentration

On Apr. 11, 1984, in MM Docket 84-19, the Commission repealed the "regional concentration of control" provisions of multiple ownership rules. The purpose of the FCC's regional ownership constraints had been to promote diversity of program service and economic competition on a regional basis by encouraging diversity in the ownership of broadcast facilities. However, due to the dramatic increase in the number of broadcast and other media outlets and anticipated growth in the near future, the FCC concluded these constraints were no longer necessary or appropriate as a means to accomplish these goals.

With respect to diversity, the increase in media outlets has diluted the potential influence of any single broadcaster, making it unlikely that a single entity will be able to exercise undue sway over public opinion. Similarly, these developments have lessened the Commission's concern that group ownership of stations on a regional basis would afford sufficient market power to permit anticompetitive behavior.

It is important to note that the other multiple ownership rules, particularly the "duopoly" and "one-to-a-market" rules, will continue to restrain group ownership, which, in many situations will be more stringent than the existing regional ownership limitations.

Increase in Nighttime Power for Class IV AM Stations

On Mar. 15, 1984, in BC Docket 79-265, the Commission amended its rules to permit an increase in nighttime power for Class IV AM stations from the current maximum of 250 watts to 1,000 watts. In addition, the FCC adopted special procedures to simplify the power increase process for most Class IV stations.

Deletion of TV Minimum Aural Power Limitation

On Apr. 19, 1984, in MM Docket 83-117, the Commission deleted the requirement that television stations operate their aural transmitters with power levels not less than 10 percent of the visual power levels. The agency noted that this should result in some operating cost reduction benefits for many broadcasters; however, the FCC acted only after determining that it is clearly in the best interest of television stations to broadcast at aural power levels that will not adversely degrade their service to the public.

Cable TV Signal Leakage Interference on Amateur Radio Frequencies

On June 15, 1984, the Commission reaffirmed its policy of enforcement of its rules concerning cable television operations that cause interference to over-the-air radio services. It considered a request for rule amendment to preclude cable television systems on frequencies assigned to the Amateur Radio Service.

However, because cable television is theoretically a closed-circuit medium, the agency concluded that radio interference between cable systems and amateur radio operations can be resolved more appropriately through the use of better quality cable installation and maintenance procedures. Therefore, the FCC did not preclude cable television operations on amateur radio frequencies. Rather, it decided to escalate its enforcement activities concerning cable signal leakage interference.

FM Subsidiary Communications

Minor adjustments in the technical rules for FM stations were adopted that will encourage the offering of additional subsidiary communications services by FM broadcast stations. These stations may transmit a number of specialized audio and data services simultaneously with their regular program broadcasts. Many of these subsidiary services are provided on a subscription basis and require the use of a receiver specifically provided to authorized users. A more efficient use of the radio spectrum is attained by techniques such as this that allows stations to concurrently provide several communications services.

Instructional Television Fixed Service (ITFS)

On July 26, 1984, the Commission amended some of the technical and non-technical rules governing ITFS. In the technical area, the FCC relaxed ITFS transmission standards, authorized the use of temporary fixed stations, and permitted delivery of ITFS programing to cable television systems. The non-technical rule changes instituted a one-step licensing process and increased the license term from 5 to 10 years. These technical and non-technical rule changes will increase the viability of ITFS service, allow for reasonable technical experimentation by ITFS licensees, and encourage more efficient utilization of ITFS spectrum.

Public Broadcasting

Deregulation

On June 27, 1984, in BC Docket 81-496, the Commission implemented significant deregulation in the ascertainment and program logging requirements for noncommercial broadcast services.

The formal ascertainment rules were eliminated entirely in the belief that pertinent social and market forces can better ensure operation in the public interest. The program log requirements were eliminated since the cost of maintaining logs far outweighed the benefits. Public broadcasters are now required to keep a quarterly issues/programs list of 5-10 issues with the pertinent information on the program and the issue addressed.

Funding of Noncommercial Service

On Mar. 28, 1984, in Docket 21136, the Commission concluded that it was advisable as a matter of policy and permissible as a matter of statutory authority to allow public broadcast stations to expand the scope of their underwriting announcements. This mechanism offers significant potential benefits to public broadcasters in terms of improving the financial self-sufficiency of the service, but, properly limited, does not threaten its underlying noncommercial nature.

The FCC granted petitions for reconsideration to the extent that public broadcast stations would be permitted to use trade and brand names, as well as product and service listings, in their donor acknowledgments. Such announcements may not include qualitative or comparative language. To summarize, donor acknowledgements may include: 1) a logogram or slogan that identifies but does not promote; 2) locations; 3) value neutral descriptions of a product line or service; and 4) trade names, product or service listings that aid in identifying the donor.

The Commission also clarified a number of other matters pertaining to fundraising by noncommercial stations. First, irrespective of the different nature and underlying purpose of underwriting acknowledgements, as opposed to donor acknowledgements, all such acknowledgements are subject to the same restrictions regarding information that may be included and scheduled. Second, during periods in which fundraising activities are conducted, the restriction that acknowledgements shall not be scheduled so as to interrupt regular programing are neither applicable nor appropriate. Third, public broadcasters are generally prohibited from engaging in fundraising activities which suspend or alter regular programing on behalf of any entity other than the station itself. Finally, in the multichannel television sound proceeding (Docket 21323), the Commission allowed public television broadcasters to use their expanded aural basebands for commercial purposes, such as paging or background music services.

AM Carriers

In August 1984, in MM Docket 83-1322, the FCC expanded the uses permitted for the carrier signal of AM radio stations. AM licensees are now able to use their carrier signal for any broadcast or non-broadcast use that does not create interference to their main channel operation or to the signals of other broadcast stations. Prior to this action, the only permitted non-broadcast uses of the AM carrier were remote control telemetry and utility load management.

AM Signal Coverage Requirements

AM signal coverage rules were amended by the Commission in June 1984 (MM Docket 83-15). In general, these amendments reduced the coverage requirements for signal intensity over business and factory areas to 5 mV/m. In addition, the requirement for permittees of directional AM facilities to take certain field strength measurements in connection with their covering license applications was deleted.

Increases in the Availability of FM Broadcast Assignments

In May 1983, the Commission adopted a Report and Order in BC Docket 80-90 which, when fully implemented, will considerably increase the number of FM stations throughout the country.

Noting that the great majority of stations operating on Class C channels, which are reserved for high-power, wide-coverage operations, were operating with facilities substantially less than the maximum permitted, existing Class C stations would be given three years (from Mar. 1, 1984) to upgrade their facilities to a minimum of 100 kW with antenna heights above average terrain of at least 984 feet (300 meters). Any of the Class C stations choosing not to upgrade to the maximum would be downgraded to a lower class of station, depending upon their facilities.

Implementation of the 80-90 decision was begun Mar. 1, 1984, when the FCC proposed, in MM Docket 84-231, 689 new FM allotments throughout the country together with procedures for applying for the channels. The 689 locations were selected by a computer program from a larger list of communities found to be in need of radio services. The program epitomized the broadcasting needs versus the technical feasibilities of granting new allotments to arrive at the final list.

Communities not on the list may be the subject of a counterproposal. Counterproposals were filed during a two month comment period. A valid counterproposal had to demonstrate a conflict with one or more of the 689 existing proposals, comply with all other current allotments, and include a statement of interest in applying for the channel. In addition, the counterproposal had to indicate the category of need, i.e., first local service, first fulltime local service, minority service, or public radio service.

Ultimately, the proposals and counterproposals will be evaluated against a list of priorities to arrive at the new list of allotments. Procedures will then be developed to allow applicants to file for the channels.

Standardized Use of Digitized Terrain Data for Determining Antenna Heights

The Commission, in MM Docket 84-705, proposed to modify its acceptance of computer-generated antenna heights above average terrain (HAAT). Noting that a variety of data sources were available, the agency proposed to allow the use of a topographic file consisting of data in a 30 second, point format or better. Due to variations among sources, the use of digitized data would be permitted as an option to the manual method using topographic maps which would continue to take precedence. Also questioning the absolute accuracy of the data, the FCC did not propose to allow the use of digitized data for individual elevations, such as antenna heights above sea level.

International Conferences and Agreements

TV Agreements with Canada and Mexico

Working arrangements for allocating VHF and UHF television frequencies were established between the United States and Canada in 1961 and 1963, respectively. They include tables of allocations and standards for both governments in considering new assignments and allocations in the border areas. Negotiations continued on revision of both the VHF and UHF agreements.

Similar agreements are in effect between the United States and Mexico covering allocation and use of UHF channels within 200 miles of the border, and VHF channels within 250 miles of the border.

FM Agreement with Canada

Canadian and United States FM channels within 250 miles of the border have been governed by the Canada-United States FM Agreement of 1947, which required that station assignments conform whenever possible to special allocation tables.

A 1963 working arrangement included revised tables of allocations, provided for changes, and listed standards to help each government make a preliminary decision on mutually acceptable changes.

Negotiations continued on the development of a new FM Agreement and Working Arrangement. The new FM Working Arrangement was completed and implemented on an interim basis pending the signing of the new FM Agreement to which it will be annexed. The new arrangement reduces the maximum coordination distance from the border to 199 miles, updates technical criteria used for planning and clarifies coordination and calculation procedures.

FM Agreement with Mexico

The United States and Mexico signed an agreement on FM broadcasting in the 83-108 MHz band, effective Aug. 9, 1973, covering the allocation of commercial and noncommercial FM stations within 199 miles of the border. Modifications to the agreement were studied and a modification to permit expanded use of subcarrier frequencies by FM stations was agreed upon.

AM Agreements in North America

International agreements for AM broadcasting cover a much greater geographic area and are much more complex than those for TV and FM because of the long distances AM signals travel at night via skywave propagation.

AM arrangements between the United States and the Caribbean nations are covered by the North American Regional Broadcasting Agreement (NARBA), which was ratified by the United States in 1960. Between 1953 and 1962, NARBA was ratified by Cuba, Canada, the Dominican Republic and the Bahamas. Jamaica did not ratify it and Haiti was not a signatory.

The treaty is designed to minimize interference between AM stations in the participating countries. Canada and the Bahamas have observed its provisions, but since 1958, Cuba, Jamaica, Haiti and the Dominican Republic have made several station assignments contrary to the treaty. In 1981, Cuba abrogated NARBA, and in 1984 Canada served notice of its denunciation of NARBA to be effective in 1985.

On Jan. 17, 1984, the United States and Canada signed a new bilateral AM agreement that supersedes NARBA and other outstanding AM agreements between the two countries. In many respects, the new agreement parallels the Final Acts of the Region 2 conference that was signed by the United States on Dec. 19, 1981, in Rio de Janeiro, Brazil, and supplements the Rio Agreement where it is necessary to recognize special conditions or procedures.

The new agreement includes special procedures for pre-sunrise and post-sunset operation by daytime-only stations and provides for new Class I stations in Alaska needed for wide-area service. As a result of the new agreement nearly 2,300

U.S. daytime-only stations were permitted to conduct post-sunset operations for the first time. Additionally, the new agreement permits, for the first time, nighttime operation in the U.S. within 650 miles of the border on previous Canadian Class I-A channels. Use of these channels is now being studied by the Commission.

Mexico was a party to the first NARBA (signed in 1937; effective in 1941), but not to the one signed in 1950. Separate negotiations resulted in a United States-Mexico agreement that generally paralleled the NARBA. The existing agreement was modified to permit approximately 1,000 U.S. Class IV stations to increase their nighttime power from 250 to 1,000 watts. Negotiations were conducted to develop an updated AM agreement with Mexico that would parallel in many respects that signed with Canada.

On Dec. 11, 1968, the United States and Mexico signed agreements covering AM station presunrise and post-sunset operations allowing presunrise operation by some 250 U.S. daytime stations on Mexican I-A channels. The U.S. Senate approved the agreements June 19, 1969, and Mexico ratified them Oct. 14, 1970. They went into effect Nov. 18, 1970, to remain operative until terminated by either government on one year's notice. The new AM agreement that is being negotiated with Mexico looks toward expanded post-sunset operations and would supersede these two agreements when implemented.

Region 2 Administrative Conference

The first session of the Region 2 (the Americas) Administrative Radio Conference for AM Broadcasting, held Mar. 10-28, 1980, in Buenos Aires, Argentina, developed the technical criteria (except channel spacing) necessary to develop a broadcast plan at the second session.

The second session of the conference was held in Rio de Janeiro, Brazil, Nov. 9-Dec. 19, 1981, and the United States became a signatory to the Rio Final Acts. In addition to a Region 2 agreement and a broadcasting plan, the Final Acts provide procedures for resolving incompatibilities during the post-conference period, including establishment of supplementary bilateral agreements.

Consistent with these procedures, the United States and Canada completed negotiations for a new bilateral AM Agreement subsequent to the conference. The agreement was signed on Jan. 17, 1984. Negotiations continue between the United States and Mexico for a new United States-Mexico AM agreement. Discussions also have been initiated with the Dominican Republic, the Commonwealth of the Bahamas, and Venezuela.

International Broadcast Service

Shortwave radio stations in the United States or its possessions that broadcast to foreign countries make up the International Broadcast Service. Eight nongovernment international broadcast stations are in operation—KGEI, Redwood City, Calif.; WINB, Red Lion, Pa.; WYFR, Okeechobee, Fla.; KTWR, Agana, Guam; WRNO, New Orleans, La.; KYOI, Saipan; KNLS, Anchor Pt., Alaska; and KFBS, Saipan. Further growth in the number of stations is now being experienced.

Video Broadcast Services

Television

General

The television broadcast band consists of 68 channels in four bands—VHF, Channels 2 through 13 (54-72, 76-78 and 174-216 MHz) and UHF, Channels 14 through 69 (470-806 MHz). Channels 70 through 83 (806-890 MHz), previously in the broadcast band, have been reallocated for mobile radio use.

Approximately 2,000 television channels have been allocated to nearly 900 communities throughout all 50 states, the District of Columbia, Guam, Puerto Rico and the Virgin Islands. Nearly one-third of those channels, listed in the FCC's Table of Assignments, are reserved for noncommercial educational stations. The others are available for commercial or noncommercial use.

In FY 1984, 447 applications for new television stations or major changes in existing ones were filed; 465 applications were either granted, dismissed, or designated for hearing, an increase of more than 12 percent over the previous year's 414 applications. A total of 544 applications for license and other changes were received during this period, with 492 applications disposed of by the end of September 1984. There was a total of 189 TV license renewal applications filed and 289 TV renewals disposed of in the fiscal year. The number of applications seeking to assign the license or transfer control of a TV station continued to increase in FY 1984. Receipts were up 14 percent to 391 applications. By the close of the fiscal year, 386 TV assignment or transfer applications were disposed of by the FCC, an increase of approximately 25 percent.

Metromedia, Inc.

On Apr. 10, 1984, the Commission granted applications to transfer control of Metromedia, Inc., the licensee of WNEW(AM-FM-TV), New York, N.Y.; KLAC, KMET(FM) and KTTV-TV, Los Angeles, Calif.; WASH(FM) and WTTG-TV, Washington, D.C.; KRLD and KRLD-TV, Dallas, Tex.; WIP and WMMR(FM), Philadelphia, Pa.; KRIV-TV, Houston, Tex.; WCVB-TV, Boston, Mass.; WFLD-TV, Chicago, Ill.; KJR, Seattle, Wash.; WCBM, Baltimore, Md.; KHOW, Denver, Colo.; WOMC(FM), Detroit, Mich.; and WWBA(FM), St. Petersburg, Fla.

John W. Kluge, the president, director, chairman of the board and chief executive officer of the company, held more than 26 percent of the outstanding voting stock of Metromedia. With his stock interests and offices, Kluge exercised de facto control of Metromedia. Through a "short form" transfer application (FCC Form 316), Kluge sought to acquire de jure control by means of a "leveraged buy out," which would transform Metromedia from a publicly traded to a private company all of whose voting stock would be owned by Kluge (92 percent) and three other existing stockholders (8 percent). The consideration necessary to accomplish the buy-out totaled nearly $1.5 billion.

Generally, a transfer which involves the movement of 50 percent or more of a licensee's stock requires the filing of a "long form" application (FCC Form 315). However, the use of FCC Form 316 was appropriate in this instance since the transaction did not involve a substantial change of control or ownership in Metromedia. Under Kluge's de facto control, Metromedia had its qualifications reviewed and was found acceptable.

The Commission concluded, therefore, that the transaction would not result in a substantial change of control regardless of the amount of stock being transferred. Nor would there be a substantial change in the identity of the owners of Metromedia, since almost all of the transferred stock was going to Kluge who already had de facto control.

Low Power Television

Lotteries

In Gen. Docket 81-768, the Commission implemented lottery procedures applicable to low power television (LPTV) and TV translator applications so that a permittee could be chosen from among competing applications instead of through comparative hearings. Lottery sessions are generally held each month.

At each session, a separate random number is drawn for each lottery group and applied to assigned number blocks for each proceeding. The random number is drawn from a raffle drum which contains capsules with the digits 0-9; each capsule containing one digit. One capsule is drawn for each digit, starting with the least significant.

Diversity and minority preferences are permitted according to lottery regulations. Diversity preferences are allowed based on the number of media of mass communications in which the applicant owns more than a 50-percent interest. A two-to-one preference is awarded to those applicants who hold no other media of mass communications; lesser preference is awarded to those applicants who hold from one to three. A medium of mass communications for lottery purposes includes a daily newspaper, a license or construction permit for an AM, FM or TV station, including LPTV and television translators, a direct broadcast satellite transponder and/or a cable television system.

A two-to-one minority preference is also awarded to applicants that are at least 50-percent minority owned. For lottery purposes minority means a person who is a member of one of the following groups: Blacks, Hispanics, American Indians, Alaska Natives, Asians and Pacific Islanders. No other groups are recognized for the purposes of the lottery. However, the FCC is considering expanding the minority preference to include women.

During fiscal year 1984, there were nine lottery sessions at which 224 separate lotteries were conducted. In October and December of 1983, 103 mutually exclusive applicants were designated for 30 lotteries. Minority applicants participated in 18 of these lottery groups and 14 of them were selected as the winner. At the January and February 1984 lottery sessions, 217 mutually exclusive applicants participated in 53 lotteries. Minority applicants were involved in 33 lotteries and won in 21 instances. The remainder of the lottery sessions conducted in the fiscal year involved 659 mutually exclusive applicants competing in 141 lotteries. In 46 of the 81 lotteries in which minorities participated, a minority applicant was successful.

Kinetications, Inc.

On Sept. 26, 1984, the Commission denied Kinetications, Inc.'s appeal of a Mass Media Bureau action returning as unacceptable for filing that company's application for a new LPTV station on Channel 67 in Atlanta, Ga. The application had been returned because the proposed station would cause interference to a co-channel TV translator station in Hiawassee, Ga.

Kinetications resubmitted the application with a minor amendment to correct the interference problem and petitioned the bureau to reconsider its action. The petition for reconsideration was denied and the application again returned on the basis that the standard for acceptance of LPTV applications is a "letter perfect" standard and requires the return of any application that did not meet the LPTV predicted interference standards.

On appeal, Kinetications argued that the proper interpretation of the LPTV application processing standard would not require the return of an application if that application were completely filled out as its application had been. It maintained that only applications with blatant defects should be returned, adding that an engineering proposal, which would cause interference to an existing translator station but could be corrected by a minor amendment, was not a defect that rendered the application unacceptable.

The Commission said the bureau's action was correct because the agency had clearly announced when adopting the final LPTV rules that it was departing from the substantially complete standard and establishing a new acceptability standard that required LPTV applications to be letter perfect when submitted. Since the Kinetications application violated the LPTV interference rules, it was defective and was properly returned.

The FCC said that perfecting amendments to returned applications were not allowed since this practice would cause repeated processing of some applications and would substantially delay the processing of all of the nearly 30,000 pending LPTV and TV translator applications. The public interest in receiving prompt service would be disserved by such a practice, the agency concluded.

Expedited LPTV Processing Procedures

In October 1984 the Commission adopted the use of a series of windows for filing LPTV and TV translator applications and eliminated the requirement to file information or certifications concerning financial qualifications. These changes are expected to streamline and expedite the processing of LPTV and TV translator applications.

In December 1983, in MM Docket 83-1250, the Commission had proposed three changes in the processing procedures for LPTV and TV translator applications: 1) modify the present cut-off procedures to provide for a series of open windows for filing applications; 2) eliminate the requirement for filing financial information or certifications with applications; and 3) create a priority or separate processing class for TV translators or certain classes of TV translator applications. The agency also sought comments on other alternatives that would help to expedite consideration of LPTV and TV translator applications.

Under the rules which were ultimately adopted, a series of windows will open 30 days or more after public notice of the window is given. New applicants would then have a limited time, generally 5 working days or more, in which to file complete applications. Properly filed applications would either be placed on a proposed grant list or grouped for a lottery with other mutually exclusive applications filed during that window and placed on a lottery public notice.

Properly filed pending applications that had not been cut off would, under the new rules, be considered cut off on the last day of the first national window filing period. Those intending to file competing applications against applications that had not been cut off and that were not linked to any cut-off applications, could file during the appropriate window filing period.

As to the elimination of the required certification, the Commission pointed out that because the strict 1-year construction period is applied to LPTV and TV translator authorizations, those won without appropriate financial backing would be terminated at the end of one year. Moreover, since compliance would be monitored post lottery, elimination of the financial certification would apply retroactively.

After considering various proposals for affording TV translator applicants a processing priority over LPTV applicants, the FCC concluded that the public interest would be served by retaining the current balance between the goals of maintaining TV translator service and encouraging LPTV service. Adoption of TV translator priorities would require new regulatory restrictions that would impair the present flexibility for providing new originating services, it added.

Finally, since site availability is the major basis for challenging lottery winners, and a significant number of lottery winners have had their applications dismissed due to lack of site availability, the new rules require an applicant to certify (on FCC Form 346) that it has obtained reasonable assurance from the property owner that the site will be available.

Cable Television

General

Almost all large cable systems, and many smaller ones, use cable television relay service (CARS) facilities to relay signals via microwave transmission for local distribution, intercity relay and remote television pickup. The steady demand for CARS facilities reflects industry growth and the need to rebuild older systems. A total of 1,473 CARS applications were received in FY 1984; 1,445 were processed.

The Commission's rules prohibit cable systems from using frequencies near those used by aeronautical and marine radio services in the vicinity of the cable system. The frequency bands shared with air navigation and aeronautical and marine services range from 108 to 136 MHz and from 225 to 400 MHz. Cable system operators are required to maintain a separation between any cable carrier frequency used within 111 km (approximately 70 miles) of the cable system. They also are required to notify the FCC of their proposed use of frequencies in those bands. The latter requirement enables the agency to determine whether such usage conflicts with nearby aeronautical stations under prescribed offset criteria and thereby ensures the prevention of harmful interference to aeronautical navigation and safety-of-life radio services. Use of any of the aeronautical frequencies without prior Commission approval is prohibited.

During fiscal 1984, the FCC received 2,249 notifications of aeronautical frequency use and 1,170 requests for waiver of the rules. A total of 2,284 aeronautical notifications were processed and 1,232 waiver requests were granted by the close of the fiscal year.

Signal Registration Statements

In June 1984, in MM Docket 83-1292, the Commission deleted its requirement that cable television operators file registration statements whenever one or more television broadcast stations are added to an operational cable system. With the removal of restrictions on the importation of distant broadcast stations by cable systems, the agency found that the necessity for this reporting requirement was substantially obviated.

It was also determined that this information essentially duplicated the required annual listing of each cable system's entire complement of both broadcast and nonbroadcast services on FCC Form 325, Schedule 2. Filing registration statements for the addition of television broadcast stations imposed an unwarranted burden on cable system operators and was the sort of unnecessary paperwork that the Federal Paperwork Reduction Act had targeted for elimination.

Preemption of Satellite Master Antenna Television (SMATV) Regulation

In November 1983, the Commission preempted local and state regulation of Satellite Master Antenna Television (SMATV) systems which could interfere with, delay or terminate interstate and federally controlled communications services.

A SMATV system normally serves residents of multi-unit dwellings, and consists of a receive-only satellite earth station which provides premium programing signals transmitted via satellite, and a master antenna for the receipt of over-the-air television signals. These signals are combined and distributed to subscribers residing in the multi-unit dwellings.

In reaching its decision, the FCC concluded that the development of interstate transmission of premium and broadcast signals delivered by satellite and received by means of SMATV systems would be frustrated if each state or locality could impose their own entry restrictions upon systems that were part of the national satellite network. State or local government entry regulation would "chill development" of SMATV service or impede its growth, the Commission stated.

Certain elements of SMATV operation, such as zoning and public safety matters, were not affected by the Commission's preemption provided the state or local regulation was not undertaken as a pretext for the actual purpose of frustrating achievement of the preeminent federal objective and so long as the nonfederal regulation was applied in a nondiscriminating manner. The Commission also chose not to impose entry restrictions of its own in the belief that open entry policies in the satellite communications field would create a more diverse and competitive telecommunications environment.

Distribution Services

Direct Broadcast Satellite (DBS) Stations

In 1982 the Commission granted conditional construction permits in the Direct Broadcast Satellite (DBS) service to eight applicants. Those permits did not specify frequency assignments or orbital positions and were expressly conditioned, in part, on the outcome of the 1983 Region 2 Administrative Radio Conference (RARC-83), which was considering the technical parameters, the allocation of orbital positions among Western Hemisphere nations and channel utilization requirements for DBS systems generally.

Following the conclusion of RARC-83 and the issuance of its Final Acts, the FCC directed the eight DBS permittees to modify their proposals to specify performance within the parameters of the Final Acts and to request specific channel and orbital assignments from among those allocated to the United States by RARC-83. The permittees were also given until July 17, 1984, to demonstrate "due diligence" in pursuing their approved systems by beginning construction or completing contracting for construction of their satellites, as required by the Commission's rules and the terms of their conditional permits.

In January 1984 each of the eight DBS permittees submitted modifications to their system proposals, as ordered by the Commission. Whereas the original proposals called for two, three or four satellites to cover the continental United States, the modified proposals uniformly accomplished this "full-CONUS" coverage with two satellites, each satellite covering half-CONUS. Four of these permittees later demonstrated compliance with the due diligence requirement and were granted modified construction permits and launch authority.

United States Satellite Broadcasting Co., Inc., will provide six channels of half-CONUS service from each of two satellites at separate locations, whereas Direct Broadcast Satellite Corporation will provide six channels of half-CONUS service plus four channels of "spot beam" service (serving three limited geographic areas) from each of two satellites at separate orbital locations. Dominion Video Satellite, Inc., will provide six channels of half-CONUS service from each of two satellites located at the same orbital position; and Satellite Television Corporation will provide six full-CONUS signals from one orbital position (with two three-channel satellites). The latter service is expected to be launched in early to mid-1986. The others expect their first launch in mid to late-1987, with second launch approximately six months later.

All systems will use 200-240 watts per channel. The system using full-CONUS signals and the system using co-located satellites are not provided for explicitly in the Region 2 Plan adopted at RARC-83. However, computer model analysis predicts that these operations will not impose constraints on the plan, since they are sufficiently flexible to permit adjustment, if necessary. The change to full-CONUS signals without an increase in power output by one permittee allegedly could be accomplished without deterioration in service quality due to advances in antenna and receiver technology.

The remaining four original permittees, CBS Inc., Graphic Scanning Corporation, RCA American Communications, Inc., and Western Union Telegraph Company, had their permits canceled for failure to comply with the terms of those permits.

Instructional Television Fixed Service (ITFS)

The Instructional Television Fixed Service (ITFS) is a microwave service which provides multiple channels in the 2500 MHz band primarily for in-school use. Up to four channels may be granted for any one transmitting site to serve the same receiving points simultaneously. Traditionally, ITFS has been used for professional applications and safety and health services, as well as for more formal education purposes.

In 1983, the FCC reallocated 8 of 28 channels in the 2500-2690 MHz band (which had been reserved exclusively for ITFS) for use in the Multipoint Distribution Service (MDS); grandfathered existing ITFS licensees, permittees of, and applicants for, the reallocated channels; and permitted ITFS licensees to utilize ITFS excess channel capacity for non-ITFS purposes, either by themselves or by leasing to others (Gen. Docket 80-112). Although permitting non-ITFS use on excess channel capacity, ITFS licensees were required to utilize each of their main channels substantially for legitimate ITFS use.

Following the Commission's ITFS-MDS leasing decision, there has been a significant increase in the number of applications for new ITFS facilities. Nearly 750 applications for authority to construct a new ITFS station or to make major changes in an existing system were filed in fiscal year 1984. This represented a more than threefold increase over the previous year. At the same time, the number of license applications more than doubled the previous year's total. The majority of the applications for new ITFS facilities proposed to lease channel time to MDS operators and many of the applications were mutually exclusive.

Finding that the 20-year old rules governing the ITFS service were neither adequate nor inclusive enough for it to deal with these rapidly changing developments, in July 1984 the Commission initiated a further rulemaking (MM Docket 83-523) concerning the nature, purpose and method of operation of the ITFS service.

Specifically, the Commission sought comments on the nature and scope of permissible ITFS service; eligibility requirements for becoming an ITFS licensee; control of an ITFS facility by a licensee that leases excess channel capacity to others; procedures for "cutting-off" applications accepted for filing; selection procedures and criteria for choosing among mutually exclusive applicants; and interference protection standards. The comments would assist it in amending the ITFS rules as necessary to assure the efficient utilization of the spectrum and to accelerate the growth and development of the ITFS service.

Audio Broadcast Services

AM

There are 106 frequencies used in the AM broadcast band. They begin at 540 kHz and continue at 10 kHz intervals to and including 1600 kHz. Of the 106 channels, 47 are U.S. Clear Channel frequencies, six are local channels and the remaining frequencies are used by either regional or foreign Clear Channel stations. These stations operate with powers between 250 and 50,000 watts. There are 4,750 operating AM stations in the United States.

In FY 1984, 309 applications were filed for new AM stations or major changes to existing ones; 392 were acted upon, including 121 which were designated for hearing. A total of 1,173 applications for licenses and other changes were received during this period, with 995 being disposed of. There was a total of 694 license renewals filed and 1,105 were disposed of, including 3 designated for hearing. The number of applications to assign the license or transfer control of an AM station totaled 1,097 and 1,044 were disposed of by the end of the fiscal year.

FM

The FM broadcast band consists of the radio frequency spectrum between 88 and 108 MHz. It is divided into 100 channels (Channel 201 through Channel 300) with a bandwidth of 200 kHz each. The first 20 channels—Channel 201 (88.1 MHz) through Channel 220 (91.1 MHz)—are reserved for noncommercial educational FM stations.

In FY 1984, a total of 1,229 applications were filed for new FM stations or major changes to existing ones, with 715 disposed of without a hearing and 491 designated for hearing. A total of 1,781 applications for license and other changes were filed, with 2,013 being disposed of, 4 of which were designated for hearing. A total of 798 FM license renewal applications were received in fiscal year 1984; 1,175 were disposed of, including 5 that were designated for evidentiary hearings on various issues. During this fiscal period, the Commission received 891 applications for assignment of license or transfer of control of an FM station; by the close of the fiscal year, a total of 846 assignment or transfer applications had been disposed of by the agency.

FM Translators

FM translators are repeater broadcast stations that generally operate unattended. They receive off-the-air signals from regular FM stations, amplify the signals and retransmit them on a different channel (hence, "translator"). These devices provide service to areas that are unable to receive FM signals because of the distance from the originating station or intervening terrain barriers.

In FY 1984, 1,327 applications for new FM translator stations and major changes to existing stations were received and 1,035 were disposed of by the end of this fiscal period.

Auxiliary Services

Auxiliary broadcast is a supplemental service used by AM, FM and TV stations to relay program materials, orders and cues from remote events to studios, from studios to transmitters and from one station to another. There are eight classes of broadcast auxiliary services: Aural Remote Pickup: Base/Mobile systems; Low-power (Wireless Microphones); Aural Studio Transmitter Links; Aural Intercity Relay; Television Pickup (Mobile); Television Studio Transmitter Link; and Television Intercity Relay.

For these eight classes, 2,285 of 2,492 applications received for new stations or major changes in facilities were handled in fiscal year 1984.

Equal Employment Opportunity

General

During FY 1984, the EEO Branch reviewed 3,594 equal employment opportunity programs for broadcast stations and cable television systems. Processing of complaints of employment discrimination were coordinated with the Equal Employment Opportunity Commission (EEOC). The Mass Media Bureau's EEO Branch had responsibility for the legal aspects of contested renewal and transfer applications in which discriminatory employment practices were alleged. The EEO Branch also maintained industry wide statistics to assess EEO trends.

Program Review

Of the broadcast station EEO programs reviewed, 889 (or 25 percent) were found to be questionable. These were analyzed thoroughly and approximately 79 percent were found to be affirmative. Licensees submitting the remaining 21 percent were advised of their specific deficiencies and the measures necessary to remedy them.

Effective Jan. 1, 1984, the EEO Branch began the annual review of one-third of all employment profiles of cable television employment units with 11 or more full-time employees as well as a number of randomly selected units with 5 to 10 full-time employees.

In FY 1984, 518 cable employment units were reviewed. Ninety-two letters of inquiry, admonishment and evaluation were sent to cable employment units. Two cable television headquarter units were required to establish hiring goals and submit periodic progress reports.

Discrimination Complaints

The EEO Branch received 139 complaints of employment discrimination against broadcast stations and cable television systems in fiscal 1984. Eighty-one of these complaints were resolved, principally by forwarding them to the appropriate EEOC District Office for investigation in accordance with the EEOC-FCC Memorandum of Understanding. Fifty-eight were included in petitions to deny or informal objections and were handled in accordance with the Commission's regulations.

Petitions to Deny

The FCC resolved 29 petitions to deny the license renewals of 68 stations based on EEO issues.

Employment Statistics

Broadcast

The 1983 broadcast employment figures for stations having five or more full-time employees revealed an increase of 1,207 employees (0.75 percent) over 1982 figures. Employment figures for the upper-four job categories (officials and managers, professionals, technicians and sales workers) showed a gain of 1,184 employees (0.89 percent) over the same period in 1982.

The FCC broadcasting trend report for 1983 showed that of 132,773 full-time employees in the upper-four job categories, women represented 35,791 (26.9 percent) and minorities totaled 16,988 (12.8 percent). Comparable 1982 statistics indicated that of 131,589 employees in upper-level positions, 34,093 (25.9 percent) were women and 16,757 (12.7 percent) were minorities.

Cable

Employment at cable units having five or more full-time employees increased approximately 13.3 percent in 1983. Annual employment reports submitted by 2,081 such units disclosed that 6,989 people (excluding headquarters' personnel) were added to the industry's workforce. Of these new employees, 3,158 (45.2 percent) were women and 1,041 (14.9 percent) were minority group members.

The cable trend report, released May 16, 1984, revealed that of the 29,448 full-time employees in upper-level positions in 1983, 5,405 were women and 3,824 were minorities—an increase of 1,132 and 508, respectively.

A categorization of job types revealed that of 59,453 total full-time employees, 28.3 percent filled office and clerical positions; technicians, 21.9 percent; officials and managers, 14.2 percent; operative or semi-skilled personnel, 13.2 percent, and sales workers, 10.2 percent. Other workers included skilled craftsmen (7.3 percent), professionals (3.1 percent), unskilled laborers (1.1 percent) and service workers (0.5 percent).

Enforcement

During FY 84, the Enforcement Division processed 79,478 broadcast and cable complaints and 9,834 comments and requests for information. The division conducted investigations involving 138 broadcast stations (58 AM, 62 FM, 18 TV), including a field investigation of one AM-FM combination. No show cause orders were issued during the year.

Renewal and Revocation Proceedings

Orders designating for hearing the license renewal applications for nine stations were issued during the fiscal year: WNHC(AM), New Haven, Conn.; WHYI(FM), Fort Lauderdale, Fla.; WALG(AM) and WKAK(FM), Albany, Ga.; KDCD-TV, Midland, Tex.; KQED(TV-ED), San Francisco, Calif.; KXKX(FM), Galveston, Tex.; WJMO(AM) and WRQC(FM), Cleveland Heights, Ohio; WYAN(FM), Upper Sandusky, Ohio; and WSEX(FM), Arlington Heights, Ill.

Short-Term Renewals

The FCC issues probationary renewals for less than the normal license term so that it may have an early opportunity to review the operations of stations in the light of past deficiencies.

Only one station received a short-term renewal for EEO deficiencies: KDEN(AM), Denver, Colo.

Forfeitures

Monetary forfeiture is a sanction available to the Commission when a statute or rule has been violated. Forfeitures of up to $20,000 may be imposed for violations not considered to be of sufficient magnitude to require revocation or refusal to renew licenses. The Mass Media Bureau took 77 forfeiture actions against broadcast stations in 1984; 13 cable operators were fined for failure to file EEO reports and 19 other forfeiture actions were taken against cable operators for violations of rules involving the Cable Television Relay Service (CARS), signal leakage and use of aeronautical frequencies.

Letters of Admonition

For less serious violations, the FCC frequently issues letters of admonition to its licensees. In FY 1984, the agency issued 150 such letters for technical violations and 226 for non-technical violations.

Political Programing

Equal Opportunity

Under Section 315 of the Communications Act, a station that permits a legally qualified candidate for public office to use its broadcast facilities must afford "equal opportunities" to the same facilities to other candidates for the same office. Section 315 is also applicable to use by a legally qualified candidate during origination programing on a cable television system. Censorship of political programing is prohibited. Exemptions from equal opportunities are provided for appearances by candidates on any of four categories of news programing. The statute also provides that candidates are entitled to "lowest unit charges" when purchasing uses of broadcast or cable television facilities.

Reasonable Access

Under Section 312(a)(7) of the Act, legally qualified candidates for federal elective office are provided an affirmative right to reasonable access to the use of broadcast facilities. Requests for time by federal candidates must be considered individually with blanket policies against the sale of specific types of time absolutely prohibited.

Fairness Doctrine

Under the Fairness Doctrine, a station must devote a reasonable percentage of its broadcast time to the coverage of controversial public issues, and if it airs one side of a controversial issue of public importance it must afford reasonable opportunity in its overall programing for the presentation of contrasting viewpoints.

The Fairness Doctrine also is applicable to origination programing on a cable television system.

General

The FCC regulates interstate and foreign communications services provided by common carriers, including voice, record, data, video and facsimile transmissions. Transmission media for these services include wire, microwave, satellite, radio, marine cable, optical fiber and other facilities. Intrastate communications come under the jurisdiction of state utility commissions.

Common carriers are required by the Communications Act to furnish their services on request for just, reasonable and non-discriminatory rates. The Commission promotes the public interest in the charges and practices of common carriers through tariff review and prescriptions, facility authorizations, accounting rules, investigations of complaints and other proceedings. The agency allocates radio spectrum and orbital slots for various types of common carrier services as well as mass media and private communications systems.

Purpose and Objectives of Regulation

The agency regulates common carriers in order that the people of the United States, so far as possible, have rapid, efficient, nationwide and worldwide communications services with adequate facilities at reasonable rates. While regulation can promote the public interest in some applications, the Communications Act requires the Commission to eliminate or avoid imposing unnecessary regulatory burdens on carriers and consumers. In some cases, competition can advance these goals better than regulation.

Many consumers have realized benefits from competition in the form of lower priced or higher quality common carrier services. During the past decade, hundreds of entities began providing a wide variety of services through terrestrial and satellite facilities which they own or resell. The divestiture of the American Telephone and Telegraph Company (AT&T)—which occurred Jan. 1, 1984, by agreement between the carrier and the U.S. Department of Justice, and was approved by the courts under the antitrust laws—is designed in part to promote further competition in interexchange services. Interexchange carriers will be able to improve their connections to exchange facilities. The rates charged by exchange carriers for use of their facilities by interstate carriers are regulated by the FCC.

Consumers also have benefited from competition in the area of customer-premised equipment. The FCC registration program, allowing direct connection of customer-owned equipment to common carrier lines, has expanded consumer choice, spurred the implementation of new technologies and lowered prices. The detariffing of equipment owned by AT&T will encourage further equipment competition and provide consumers with a gradual transition from regulated rates.

Telecommunications Industry

Telephone

In 1983, the nationwide domestic system primarily consisted of AT&T Long Lines, the Bell Operating Companies and some 1,429 non-Bell telephone companies with a gross plant value of $210 billion. On Jan. 1, 1984, the system was restructured with the divestiture of the Bell System Operating Companies from AT&T. AT&T retained the long distance part of the business and the 22 divested companies grouped into seven regional holding companies to provide local exchange service within defined greographic areas. In addition, other common carriers, such as MCI and GTE Sprint, offer toll telephone service in competition with AT&T.

AT&T provides telephone service between the U.S. mainland and overseas points. The Hawaiian

Telephone Company connects Hawaii with the mainland and foreign points. Service to, from and in Alaska is provided jointly by Alascom, Inc. and local exchange carriers. Subsidiaries of ITT World Communications Inc. provide overseas telephone service for Puerto Rico and the Virgin Islands.

Telegraph

The Western Union Telegraph Company (WU), with a gross plant value of $2.5 billion, handles most domestic telegraph traffic. WU had total operating revenues of $722 million in 1983. It is the largest established common carrier for domestic record services (telegram message service, telegraphic money order service, Mailgram and Telex/TWX) and has moved heavily into data communications. Under the Record Carrier Competition Act of 1982, WU was permitted to reenter the international markets barred to it for decades, and the International Record Carriers (IRCs) were permitted to offer domestic record services, provided that both groups of carriers freely interconnect with one another.

In a series of orders in 1982 and 1983, the Commission established the interconnection obligations of these carriers, and it is anticipated that, over time, WU's domestic dominance will decline and the international record market will become more competitive.

Satellite Carriers

The Communications Satellite Corporation (Comsat), with a gross plant value of $826 million and total operating revenues of $334 million, is the international communications satellite carrier. Comsat makes satellite channels available to established international carriers for overseas services. U.S. carriers lease circuits from Comsat to provide service between the United States and other parts of the world. Overseas television service is available by satellite circuits between the U.S. mainland and Hawaii, Alaska, Puerto Rico, Guam and numerous countries throughout the world.

The basic communications plant of a domestic satellite carrier consists of one or more communications satellites and associated earth stations offering the same basic "product" as a terrestrial microwave carrier within the United States—i.e., audio, video and data channels, primarily over the long haul.

Mobile Common Carriers

Mobile common carriers provide service for hire between land mobile stations wherever located and their associated base stations or between land mobile stations. Mobile common carriers are characterized either as wireline (those companies providing landline local exchange telephone service) or non-wireline. Non-wireline carriers are also referred to as radio common carriers (RCCs). Some 1,000 RCCs provide mobile radio telephone, paging, rural radio and air-ground services. Additionally, one wireline and one non-wireline carrier may be licensed in each cellular market.

Microwave Carriers

Although the use of digital facilities is increasing, the terrestrial point-to-point microwave carriers primarily use analog transmission channels configured into private line telephone, video, data or facsimile networks. The physical plant (microwave radio equipment) is concentrated almost wholly in long-haul intercity facilities; Intraexchange facilities generally are leased from local telephone companies. Competition with the telephone companies and other microwave carriers is in the form of a variety of service offerings and rate structures.

Resale Carriers

These companies offer services ranging from reduced rate voice communications to data communications to video services. Since the resale and shared-use of Wide Area Telecommunications Services (WATS) and Message Telecommunications Services (MTS) was allowed beginning in June 1981, the number of resale carriers has increased dramatically. The Commission determined it should forbear from regulating resellers because of their number and because their underlying carriers are subject to regulation.

Miscellaneous Common Carriers

Miscellaneous common carriers primarily provide, through the use of microwave facilities, TV signals to cable television firms and broadcast stations.

Customer Premises Equipment (CPE)

Many firms provide various customer premises terminal equipment to the telecommunications market. The telephone industry is the principal supplier of interconnect services, although an increasing number of non-telephone companies supply terminal equipment to the industry. Equipment that is connected to the telephone network must be registered in accordance with Part 68 of the Commission's rules.

Some examples of terminal equipment are: switchboards for businesses or apartment buildings; private branch exchange (PBX) facilities that allow communications within particular locations; market telephone systems that provide for the direct selection of an outside line from a multiple telephone set; data terminals for transmitting or receiving data signals over a voice circuit and devices that answer the telephone and receive or send messages.

Major Proceedings

Second Computer Inquiry (Docket 20828)

On May 2, 1980, the FCC determined that the provision of enhanced services or CPE by common carriers was not subject to rate regulation, and that if AT&T provided either, it must do so through a separate subsidiary.

The agency received 26 requests for waiver, petitions for clarification and petitions for rulings regarding the Computer II rules; 18 of which were resolved in FY 1984.

Actions Involving AT&T

In a series of orders issued in 1982 and 1983, the Commission approved the capitalization of AT&T Information Systems, Inc. (AT&T-IS), a subsidiary formed to provide enhanced services and CPE. On Nov. 23, 1983, the agency approved AT&T's plan to provide more than $6 billion to AT&T-IS to support the provision of embedded CPE transferred to AT&T-IS from the Bell Operating Companies at divestiture.

In FY 1984 the FCC continued to monitor the sharing of administrative services between AT&T-IS and affiliated companies and AT&T's accounting for the costs of those services. The staff is completing its investigation of the allocation of Bell Telephone Laboratories, fundamental research expenses to AT&T-IS, pursuant to an order adopted Dec. 14, 1983. The staff is monitoring AT&T's internal reorganization into two sectors, the regulated communications sector and the unregulated technologies sector, to ensure that any restructuring does not conflict with the policies set forth in the Second Computer Inquiry (Computer II).

Other actions in FY 84 involving AT&T included the adoption of an order Dec. 22, 1983, which denied AT&T's petition for a ruling that receive-only earth stations may be offered as part of a tariffed offering; adoption of a liability notice Nov. 8, 1983, finding that AT&T and Northwestern Bell had violated the Computer II limitations against transfer of customer proprietary information between affiliates within AT&T; and a June 27, 1984, decision permitting AT&T-IS to provide basic, resold domestic services of any interexchange carrier including those of an affiliated carrier.

On Apr. 30, 1984, AT&T filed a petition for relief from the structural separation requirements adopted in Computer II. The Commission staff is evaluating comments on AT&T's petition and AT&T's responses to requests by the staff for supplemental information.

Actions Involving the Bell Operating Companies

On Nov. 23, 1983, the FCC concluded that the post-divestiture Regional Bell Operating Companies (BOCs) must offer CPE and enhanced services through subsidiaries or other entities that were required to be separated fully from regulated operations by July 1, and the BOCs were permitted to begin providing CPE and enhanced services on an unseparated basis immediately upon divestiture from AT&T until June 30, 1984.

On Mar. 30, 1984, the Commission denied a petition by the North American Telecommunications Association requesting the agency to defer permission for the BOCs to engage in referral of dial tone customers from regulated operations to their affiliate which provides CPE. In that order the Commission required the BOCs to establish procedures to ensure that all vendors received equal treatment in connecting their CPE offerings to the BOCs' regulated offerings.

On June 1, 1984, the agency denied reconsideration of its order establishing limited structural separation requirements for the offering of CPE and enhanced services by the BOCs. That order was affirmed by the Court of Appeals for the Seventh Circuit.

Throughout 1984 the Commission's staff reviewed capitalization and accounting plans filed by the BOCs. The staff placed emphasis on the BOCs' compliance with the Computer II rules and conducted numerous field investigations. These efforts are intended to result in the issuance of staff reports on each BOC and an order by the Commission approving or rejecting the BOCs' requests for permanent capitalization of enhanced services and CPE operations.

Other actions involving the post-divestiture BOCs included the conditional approval of plans by certain BOCs to utilize their affiliated CPE and enhanced services providers to offer the regulated entity's Centrex services on an agency basis, and allowing certain BOCs to provide limited forms of protocol conversion within their basic services network. The staff is examining requests by the BOCs, as well as comments regarding the possible offering of other forms of protocol conversion within the basic services network, and possibly authorizing the BOCs to offer certain forms of Network Channel Terminating Equipment and equipment used to provide Emergency "911" services in conjunction with tariffed offerings.

Access to Telecommunications by the Disabled and Hearing Impaired

On Nov. 8, 1983, the FCC concluded that the states should decide whether specialized CPE for disabled persons should remain under tariff. On Dec. 1, 1983, the Commission adopted rules concerning locations at which telephones must be compatible with hearing aids, uniform specifications for hearing aid compatibility, requirements that telephone packaging contain information on whether an instrument is hearing aid-compatible and the limitations on the placement of non-compatible telephones (labeling requirements).

On Apr. 11, 1984, the agency modified its rules concerning the effective date of labeling requirements to reduce costs on manufacturers which could be passed on to consumers including the hearing impaired while ensuring that information needed by the hearing impaired was timely disseminated. The date that all packages offered for sale to the public must contain compatibility information was postponed until Jan. 1, 1985. However, manufacturers were required to ensure that if packages were unlabeled as of June 1, 1984, they must have on hand point-of-sale information equivalent to package labeling information.

On July 11, 1984, the Commission granted a waiver to AT&T to permit AT&T-IS to support the provision of specialized CPE for the disabled which remains under tariff in states which have not chosen to deregulate that equipment. In that same action it also denied petitions for reconsideration of its order establishing hearing aid-compatibility requirements, and in particular denied requests that the agency regulate the price of specialized CPE through federal tariffing or require federally mandated subsidies.

Competitive Carrier Rulemaking (CC Docket 79-252)

The competitive carrier rulemaking was instituted to adjust tariff and facility regulatory requirements for carriers in light of the entry of new suppliers of telecommunications services in the marketplace. To reflect the competitive nature of the domestic telecommunications industry more accurately, the agency distinguished between carriers on the basis of their dominance of power in the marketplace.

Dominant carriers are those carriers that have the ability to control price and, therefore, to charge discriminatory or predatory prices. Dominant carriers continue to file facilities applications and tariffs with cost support to help protect consumers.

Nondominant carriers are those lacking market power. The tariffs and facilities filing requirements for them were substantially reduced or streamlined. Initially, the specialized common carriers and resellers of terrestrial services were classified as nondominant. These nondominant carriers were subject to streamlined regulation which involves tariff filings on 14 days' notice, a presumption of lawfulness for these tariffs, reduced cost justification data and which do not require prior facility authorization for domestic lines.

In the second phase of the rulemaking, the Commission considered whether certain companies offering a communications service in markets where they lack dominance or market power should be regulated as common carriers, and whether the FCC may forbear from regulating common carriers. The agency asserted its authority to refrain from imposing Title II regulation generally where such forbearance would promote statutory purposes, and as the first step relieved terrestrial resale carriers of the duty to obtain Section 214 authorizations for domestic lines and to file tariffs.

Subsequently, the Commission classified domestic satellite carriers and resellers, miscellaneous common carriers, interexchange carriers affiliated with exchange carriers and the domestic operations of international record carriers (including Western Union) as nondominant and, therefore, subject to streamlined regulation. The agency also extended forbearance treatment to all nondominant resellers and to specialized common carriers.

In a later phase of this proceeding, the Commission extended the category of forbearance to the following types of carriers: domestic satellite carriers providing domestic interstate services, miscellaneous common carriers, carriers providing domestic, interstate and interexchange digital transmission networks (DEMS systems) and affiliates of exchange carriers providing interstate interexchange services. The agency had also ordered the mandatory cancellation of all forborne carrier tariffs on file at the FCC and prohibited these carriers from filing any new tariffs.

The Commission continues to review streamlined regulation and forbearance, and will determine whether such regulation should be extended to other providers of telecommunication services. The treatment of certain international and domestic services remain under consideration.

Access Charge and Divestiture Tariff Proceeding (CC Docket 83-1145)

On May 5, 1984, the Commission ordered AT&T to implement a 6.1 percent across-the-board reduction in its rates for long distance telephone (MTS and WATS) services, both domestic and international, which became effective May 25, 1984. It also ordered an 8.5 percent reduction in the rates proposed to be charged interexchange carriers by local telephone companies for use of their facilities to originate or terminate interstate service.

Also in its May 5 order, the FCC allowed the switched access tariffs filed by the National Exchange Carrier Association (NECA) and individual exchange carriers to become effective May 25, 1984, provided that all Commission mandated changes had been satisfactorily implemented. The switched access tariffs allow local telephone companies to change the mechanism they use to recover the cost of facilities connecting homes and businesses with telephone company offices. For example, the past practice combined fixed costs of those facilities into cents-per-minute charges added on to interstate long distance bills. The local telephone companies would then settle with the long distance companies via a series of complex contracts. The new tariff procedure permits some of the costs to be charged directly to customers rather than indirectly through long distance rates. As a result, costs will be recovered more fairly and long distance rates will fall.

The Commission's May 5 order found that the access rates proposed by the exchange carriers were not adequatedly cost supported. Based on the agency's estimates of a reasonable allowance of growth from actual 1983 accounts and adjustments from understated demand, the access and concomitant MTS/WATS rate reductions were necessary so that neither AT&T nor the exchange carriers exceeded their 12.75 percent rate of return for switched services. The access tariffs include a customer line charge of up to $6 per month for multi-line business users. The $2 charge for residential and single-line businesses has not been put into effect. The differential between charges paid by AT&T and those paid by its long distance competitors to the local carriers has not been affected by the switched access tariffs.

The Commission also said that AT&T may file for an interstate long distance directory assistance (IDA) charge of no more than 50 cents per call, provided that AT&T offers at least two free IDA calls per month.

Local ends of interstate or international private lines—special access services—range from telegraph-grade and voice-grade to high-capacity analog and digital channels. The Commission's Access Charge Plan requires that local telephone companies, including the Bell Operating Companies (BOCs), offer special access services under access tariffs.

With limited exceptions, neither the Access Charge Plan nor the Modified Final Judgment (MFJ) required changes in the rates, rate structure or provisions that currently apply to special access services. The BOC tariffs, however, must implement the MFJ regarding Local Access and Transport Area (LATA) boundaries and by offering services to AT&T on the same terms as other interexchange carriers.

In September and October 1983, the local exchange carriers filed proposed access tariffs, which the Commission found to be unlawful in its Feb. 17, 1984, ECA Tariff Order and the Common Carrier Bureau's Mar. 7, 1984, Non-ECA Tariff Order. NECA and other individual exchange carriers filed new access tariff proposals in March 1984.

In its ECA and Non-ECA tariff orders, the Commission found that the most serious problems with the special access filings were: rate structures and levels, variations in the rates proposed by different exchange carriers and deficiencies in the cost support and demand data provided.

On Nov. 9, 1984, the agency found the special access tariffs filed by NECA and individual exchange carriers to be unlawful. These tariffs were scheduled to become effective Nov. 13, 1984. The proposed special access tariffs were unlawful because the rates and/or rate structures were unreasonable and unsupported. The Commission ordered that revised tariffs be filed by Dec. 3, 1984, to become effective Jan. 17, 1985.

The FCC sought to ensure that the exchange carriers imposed only reasonable, cost-supported rates and to eliminate any rate structure characteristics which allowed the exchange carriers to charge different rates for the same service. The Commission also sought to ensure compliance with the Private Line Guidelines (CC Docket 79-246) which shifted the discretion to assemble services to customers and the marketplace.

The Commission found that NECA's March-filed rate structure overlapped two differently priced elements (the proposed local channel and connecting channel elements). The two elements appeared to have similar functional and physical characteristics, but they had different rates. It ordered the exchange carriers to file a revised tariff structure with no overlapping rate elements.

NECA provided information on Oct. 10, 1984, illustrating the effects of certain tariff structure and rate level changes. The Commission did not rule on the lawfulness of these illustrative tariff changes in a Nov. 9 order, but noted that the October structure would appear to remedy the local/connecting channel problem, the bundling of two- and four-wire facilities and the bundling of metallic and telegraph service.

The Commission found two major problems with the distance-related charges of the March-filed special access tariffs. The revenue requirement associated with the first eight miles of transport was bundled into the local and connecting channel elements. Therefore, short-haul customers (particularly multipoint), would experience unjustified rate increases. Secondly, the distance-related charges would impose a flat rate for each broad mileage band.

It further held that NECA's March filing was unlawful because the rates relied on the same cost data, projections and methodology found deficient in the ECA and Non-ECA tariff orders. Also, certain message station equipment costs had been assigned to special access in violation of the rules and allocated official station apparatus and large PBX costs to special access. The Commission also found that the March tariffs improperly included dedicated access line extension costs in the computation of special access rates.

The FCC proposed a multi-step phase in of special access tariff rates for the Other Common Carriers (OCCs). The agency prescribed, as the first step, that the OCCs would pay rates reflecting a 20 percent markup over the current Docket 20099 settlement agreement rates until special access tariffs go into effect. AT&T continues to get special access services under its existing arrangements until special access tariffs become effective.

Once special access tariffs are in effect, under the phase in being considered, the OCCs would be allowed a 50 percent discount from the tariff rates for six months. Next, they would pay 75 percent of the tariff rates for six months. Then the OCCs would pay the full special access tariff rates. The rates for existing OCC circuits will be phased in; new orders will be priced at the full tariff rates.

The FCC also ordered the exchange carriers to cancel or withdraw their private-line "copycat" tariffs and concurrences in AT&T's private line tariffs, because those tariffs overlapped and conflicted with the special access tariffs. Services which do not overlap will be consolidated in the special access tariffs when refiled.

Access Charges (CC Docket 78-72, Phase I)

On Feb. 15, 1984, the Commission further modified the access charge plan by deferring customer line charges for residential and single-line business customers to June 1, 1985, pending further examination of various issues concerning the implementation of such charges, including their effect on universal service and small telephone companies.

The Commission also increased the differential between premium and nonpremium access charges; provided that the latter would be assessed on a flat-rate, per-line basis for interexchange carriers providing MTS-WATS equivalent services; revised the method of phasing out the differential during the transition to equal access, and clarified or modified the application of access charges to the closed end of WATS lines, the open end of foreign exchange (FX) lines and "leaky" private lines.

Finally, the agency reaffirmed its commitment to monitor the effects of the access charge plan through various staff studies and proceedings during fiscal year 1985.

Revision of the Uniform System of Accounts (CC Docket 78-196)

Telephone companies must file regular financial reports with the FCC. The reports, which are available for public inspection, are prepared according to a standard accounting system entitled the Uniform System of Accounts (USOA).

When the USOA was established more than 40 years ago, the FCC's principal concern was monitoring telephone company rates of return overall. Because recent rate cases dealt as much with individual service rate levels as with overall company results, the USOA was found to be inadequate.

In October 1981, the FCC proposed modifications to the USOA, incorporating a concept of financial accounting principles to underpin the new USOA in conjunction with separate, parallel costing and separations methodologies to satisfy the FCC's diverse data needs.

The agency established a Telecommunications Industry Advisory Group, comprised of FCC staff, industry representatives, state regulatory bodies and members of the public and the accounting profession to recommend revisions to the USOA. These recommendations were delivered to the Commission at intervals throughout 1984 and formed the basis for a further proposal in this proceeding (to be issued in December or January of FY 1985) and for a separate proposal in CC Docket 84-469.

Modification to the USOA for Class A and B Telephone Companies (CC Docket 83-1347)

On Oct. 3, 1983, all local telephone exchange carriers, including the BOCs and independent companies, filed access tariffs. These tariffs were to replace existing access compensation mechanisms during 1984, the first year of common tariffed access charges mandated by the Commission in CC Docket 78-72, Phase I.

As a result of the access charge decision, the FCC in December 1983 proposed modifying the USOA for telephone companies subject to Part 31 of the rules to account for the access charges.

The agency proposed adding three revenue accounts and three expense accounts. It also proposed to modify Annual Report Form M and FCC Report 901 to incorporate the new accounts. The revenue accounts would be used to record all charges assessed by the local exchange carriers on other exchange carriers, the interexchange carriers and the end users for access to the local exchange network. The expense accounts would be used to record the interexchange carriers' expense of access to the local exchange carriers' facilities.

On Oct. 17, 1984, the Commission basically adopted the accounting and reporting changes as proposed.

Separate Books of Accounts for Nonregulated Activities (CC Docket 81-893)

The Commission required nonregulated activities to be accounted for in a separate set of books by carriers that do not conduct these activities through a separate subsidiary. It established separate books of accounts for nonregulated activities to assure availability of data for regulatory purposes which are not distorted by nonregulated activities, to establish specific accounts to identify account balances associated with nonregulated activities and to monitor the scope of nonregulated activities and any potential for adverse impact on regulated services.

Applicability of Generally Accepted Accounting Principles to the USOA (CC Docket 84-469)

As part of its functions in CC Docket 78-196 (Revision of USOA) the Telecommunications Industry Advisory Group provided the Commission with a recommendation that the USOA accommodate the body of professional accounting theory, practice and procedure commonly referred to as Generally Accepted Accounting Principles (GAAP).

Acting on this recommendation, in May 1984 the Commission issued a proposal for the adoption of GAAP within the USOA. Final decisions on this issue are anticipated to be forthcoming in the second quarter of FY 1985.

Accounting Instructions Associated with the Litton Systems Antitrust Lawsuit

On Sept. 26, 1984, the Commission established specific accounting instructions for the judgment and other costs associated with the Litton Systems antitrust lawsuit against AT&T. It required AT&T and the divested BOCs to record the cost of the judgment as well as the related litigation costs in a non-operating expense account. This accounting treatment excludes these costs from ratemaking consideration until they are considered in a future rate proceeding and shifts to the carriers the responsibility of demonstrating that these costs should be allowed.

The carriers sought reconsideration of this decision; Commission action is expected early in 1985.

Depreciation Rates

In Docket 20188, the agency amended its rules to permit FCC-subject telephone companies to use the remaining life and equal life group depreciation methods. A 3-year phased implementation of these methods culminated in the first quarter of FY 1984 with the issuance of six orders prescribing remaining-life rates for one-third of the major telephone carriers and equal life group rates for new additions to the buildings and general use equipment accounts for all carriers.

With these orders remaining life and equal life group rates were approved for all accounts of all carriers requesting such treatment. During the first quarter of FY 1984, the FCC also updated depreciation rates for some of the carriers not subject to a full review of life and salvage factors in calendar 1983. In cooperation with state public utility commissions, agreements were reached in most accounts regarding the life and salvage factors underlying all these new depreciation rates. The annual increase in depreciation expenses resulting from these orders was approximately $1.2 billion.

In FY 1984 the FCC also reviewed depreciation rates for 22 AT&T subsidiaries, referred to as regional interexchange corporations. They were established Dec. 31, 1983, in accordance with the AT&T reorganization plan approved by the court in *United States v. American Telephone and Telegraph Company*, 522 F. Supp. 131 (D.D.C. 1982). Initial rates for these 22 new carrier entities were adopted by the FCC in the third quarter of FY 1984 The initial rates were, in general, equivalent to the rates currently prescribed for this property when it was owned by the various local operating companies.

During FY 1984 the FCC also reviewed depreciation rates for 14 carriers scheduled for represcription in 1984, 8 companies that requested annual updates of previously prescribed rates, and 11 companies for which initial depreciation rates are required for the recently established Accounts 235 and 262. The FCC plans to order these rates in the first quarter of FY 85.

Full depreciation rate reviews are also underway for Western Union and all subsidiaries of AT&T Communications. Orders for these companies are expected in FY 1985.

Expensing of Station Connection Costs (CC Docket 79-105)

The FCC directed all subject carriers, effective Oct. 1, 1981, to segment Account 232 "station connections" into at least two subclasses: "station connections—inside wiring" and "station connections—other." In addition, all subject carriers were required to expense inside wiring on a phased-in basis over a 4-year period. The phase in from Oct. 1, 1981 through Sept. 30, 1982 would be 25 percent; Oct. 1, 1982-Sept 30, 1983, 50 percent; Oct. 1, 1983-Sept. 30, 1984, 75 percent; and beginning Oct. 1, 1984, 100 percent. Therefore, as of Oct. 1, 1984, the decision to expense inside wiring costs was fully implemented.

Those carriers that felt it would not be too disruptive to their operations and had gained state regulatory approval were allowed to use the "flash-cut" approach to expense station connection costs. Additionally, the FCC required all subject carriers to use a 10-year amortization schedule for the embedded investment in "station connections—inside wiring" to ensure that the investment was fully recovered. The new investment associated with "station connections—other" would continue to be capitalized.

The agency also solicited comments on, among other things, a proposal of similar costs reflected in Account 234 "large private branch exchanges." Simple inside wiring (single- and two-line) installed for residential and business use was addressed in CC Docket 81-216. The Commission's order permitted the installation of new and the augmentation of existing simple wiring by either the telephone company or other vendors, and that, if it were provided by a phone company, it would be provided under tariff. CC Docket 82-681 deregulated new inside wiring (multi-complex) installed to connect station components to one another or to the common equipment of a PBX or key system.

On July 19, 1983, the FCC invited comments on a waiver petition filed by Illinois Bell Telephone Company seeking to change the 10-year amortization period to 6 years. On Dec. 14, 1983, the Commission determined grant of Illinois Bell's petition was in the public interest, subject to the Illinois Commerce Commission's approval of rates including the additional revenue requirement involved. The FCC stated that this change was consistent with its goal of removing the historical CPE base and related equipment from regulation on an expedited basis. In addition, the Commission granted four other waivers to shorten the amortization period.

The Commission is considering issuing a rulemaking notice in 1985 on a proposal to deregulate new simple inside wiring as well as the maintenance of all inside wiring.

Rate and Service Regulation

Wide Area Telecommunications Service (WATS) (Dockets 19989, 21402, CC 80-54 and CC 80-765)

Essentially, WATS is AT&T's bulk-rate long distance telephone service. Large volume users such as reservation services, airlines, corporations and the Federal Government are major customers. The Commissions has made considerable efforts to achieve cost-based WATS rates so that ordinary long distance telephone (MTS) users are not subsidizing large-volume users.

Since the first WATS tariff was filed in 1961, the offering has been subject to continuous scrutiny. In 1977, the FCC rejected proposed revisions to the WATS tariff on 19 independent grounds. It found they violated ratemaking principles and costing standards established earlier. On appeal, the District of Columbia appellate court required the Commission to establish a timetable for achieving a lawful WATS tariff and retained jurisdiction over the matter.

The FCC took a dual approach to reduce the price discrimination inherent in the WATS tariff. The first prong was structural. In 1980, in CC Docket 80-54, the agency required AT&T to remove restrictions on resale and sharing, allowing resellers to purchase the heavily discounted WATS offerings and then to resell them to smaller users at a profit. The substantial price discrimination between WATS and MTS that existed prior this decision was indicated by AT&T's claim that it would lose 0.7 to 1.7 billion dollars if resale were permitted.

To permit AT&T and its customers to adjust to the newly competitive market forces of resale and concomitant price discrimination reductions, the FCC allowed AT&T to file a new tariff in September 1980. However, the filing was suspended and an investigation begun in December 1980.

The first phase of the investigation (CC Docket 80-765) involved inefficiencies in network use due to lack of a time-of-day sensitive rate structure. After completion of this phase, a new WATS tariff became effective June 1, 1981, under which rates for larger users were increased, substantially in some cases, and rates for smaller users were decreased.

On Apr. 14, 1982, the FCC set forth the issues to be heard in the second phase of the investigation. The main issue was whether WATS users pay their fair share of public switched network costs. AT&T was directed to demonstrate that WATS users were not beneficiaries of an undue preference or advantage in violation of Section 202(a) of the Act and that the WATS rate level and structure do not violate Section 201(b) prohibitions against unreasonable rates, practices and classifications.

Another approach to obtaining cost-based WATS rates was the "like services" proceeding, Docket 21402, in which the FCC found that MTS and WATS were functionally equivalent and thus "like services" under Section 202(a) of the Act. This decision was vacated on appeal and remanded for further consideration.

Private Line Rate Structure and Volume Discount Rulemaking (CC Docket 79-246)

The private line rate structure rulemaking was instituted to promote effective, and more efficient, regulation of carriers required to file tariffs by more consistent structuring of the tariffs offering private line services.

The FCC proposed rate structure guidelines intended to serve as a regulatory alternative to the time-consuming and often inconclusive review process applied to tariffs under traditional common carrier regulation. Rather than continuing to examine the carriers' purported financial justification for numerous service offerings, many of which reflect the market segmentation (discrimination) incentives rather than independent customer demand, reviewing tariff proposals for compliance with rate structure guidelines would enable the Commission to assess the internal consistency of the proposals as well as their compatibility with related service offerings and common functional elements.

The same comparative evaluation would be facilitated for customers, who could more readily compare different offerings as well as distinct service functions. Where desired, customers could construct their own services by assembling functions provided by different suppliers rather than face the discriminatory rate and use constraints of a complexly interwoven rate structure.

Several rounds of comments and two rate restructure proposals submitted by AT&T were considered. During the same period, the Commission's competitive carrier rulemaking substantially moderated the tariff-filing requirements for some carriers and lifted them entirely for many others. In 1983 the FCC initiated a separate inquiry into the possible reform of tariff-filing burdens imposed on AT&T.

Even prior to their formal adoption, the underlying principles of the guidelines had often been employed in the tariff review process. They embody fundamental statutory prohibitions against unreasonable discrimination or unjustified rate variations in the provision of like services. Complex tariffs may be evaluated without resorting to the traditional review of financial justification—which is increasingly problematic in a fast-changing competitive context. The guidelines assist the Commission in identifying areas of difficulty, and—absent justification for departure from the guidelines, and a showing that a tariff is otherwise just, reasonable and nondiscriminatory—determining the unlawfulness of noncomplying proposals.

In April 1984, the agency formally adopted the guidelines proposed for review of private line rate structures. The guidelines posit: integrated and consistent rate structures for the same or comparable services; rate elements which reflect market demand rather than carrier discretion, and which if separately available anywhere are separately available throughout the rate structure; consistent definitions of rate elements with respect to the underlying service functions, and simpler and more clearly presented rate structures. The guidelines, if followed, would assure a building-block tariff structure with readily identifiable components comparable throughout the structure, rather than a complex mix of overlapping, often artificially constructed offerings.

The agency also revised standards for permissible private line discounts, standards earlier established through extended Commission review of AT&T's TELPAK offerings. The standards for permitting bulk discounts required that a proposed bulk rate classification be justified as entailing material cost savings and reflect those savings while fully recovering costs. Failure to meet these conditions required the proposing carrier to establish grounds for waiver, such as competitive necessity. The FCC had expressed concern that these restrictions on volume rate discounts could result in inefficient use of telecommunications facilities.

The Commission determined that a strict cost recovery standard, coupled with a competitive necessity requirement, should not be imposed on all volume-discounted private line (and special access) offerings. Instead, consistent with the rationale of the private line guidelines, volume-discounted offerings are to be integrated with the carrier's rate structure and applied to similar, non-discounted service offerings—without restrictions on customers or use.

The absence of such restrictions, coupled with established Commission policies on resale, sharing and interconnection, should enable customer demand and marketplace factors to restrain the discriminatory offering of such volume discounts more effectively than could traditional rate regulation. Until sufficient experience is developed to enable more precisely focused guidelines for volume discounted offerings to be established, the agency will place primary emphasis in this area on volume discounts being fully integrated into rate structures consistent with the overall private line guidelines.

License Contract Agreements and Other Intrasystem Arrangements (CC Docket 80-742)

On Dec. 22, 1983, the Commission terminated its inquiry into license contract agreements and other intrasystem arrangements used by the four major telephone systems. The license or service contract is an agreement in which a designated organization within a telephone system agrees to provide services to affiliated telephone companies on an allocative billing basis.

The primary purpose of the inquiry was identification of any aspects of the license contract mechanism that might jeopardize the ratepayers' right to efficient cost-related service and determination of appropriate action.

Regarding AT&T, the MFJ required termination of certain intrasystem arrangements, the establishment of a centralized service organization for the 22 divested BOCs and priority treatment for the BOCs until Sept. 1, 1987. Accordingly, the FCC found that AT&T's post-divestiture methods for allocating costs among affiliates should be reviewed as part of an ongoing review of AT&T's accounting pursuant to the Computer II requirements and in other appropriate proceedings. It also found that cost allocations by independents would be better handled during the FCC's review of proposals to detariff their embedded CPE and through revisions to the Uniform System of Accounts.

Domestic Facilities

Satellites

In April 1983 the Commission authorized construction of 19 domestic satellites and the launch of 29 new or previously constructed satellites. If all are launched, there will be a total of 38 domestic satellites serving the United States by 1988.

At the end of fiscal year 1984, 22 operational domestic communications satellites were in orbit at 21 locations—17 in the 4/6 GHz bands, 4 in the 12/14 GHz bands, and 1, a hybrid, operating in both bands. Of the 4/6 GHz satellites, 6 are part of RCA American Communications, Inc.'s Satcom System and are located at five orbital locations; 4 are in Western Union Telegraph's Westar System; 2 are in Hughes Communications' Galaxy System; and 5 are in AT&T's Comstar and Telstar Systems and are located at four orbital locations. These satellites provide message toll service, television distribution and both single-channel-per-carrier and multiple-channels-per-carrier for voice, data, television and digital data. More than 6,000 ground stations are licensed for these services. Many stations use 4.5 meter antennas to receive and distribute video and audio signals.

Satellite Business System's four 12/14 GHz satellites provide a wideband, switched, private communications network to large industrial and government users on a commercial basis using 5 or 7 meter antenna earth stations. Voice, data and image traffic is assembled into a digital stream and the all-digital carriers use time division multiple access to satellite transponders.

GTE Spacenet has launched one hybrid satellite operating in both the 4/6 GHz and 12/14 GHz bands. In November 1983, the Commission received applications from 21 domestic satellite companies requesting 72 additional in-orbit satellites, some of which are replacement satellites. A Public Notice listing the applications, which, upon initial review, were found acceptable for filing, was issued in March 1984. The Commission is currently processing this group of applications.

Reduced Orbital Spacing (CC Docket 81-704)

In 1983 the FCC decided to reduce orbital spacing from 4 to 2 degrees at 4/6 GHz, and from 3 to 2 degrees at 12/14 GHz. The actual implementation of reduced orbital spacing is reflected in a revised orbital deployment plan adopted at that time that provides a transition from current satellite spacing.

Reduced spacing for satellites operating in the 4/6 and 12/14 GHz bands may be achieved by using coordinated design practices and implementing earth station facilities using antennas with improved side-lobe and cross-polarization discrimination performance. The Commission's staff performed detailed technical analysis examining the feasibility of reduced satellite spacing. In October 1984 the FCC reconsidered its decision by modifying certain technical standards for space and earth stations to facilitate the transition to 2 degree spacing. In addition, an Advisory Committee was established to provide expert technical advice on the implementation of the reduced spacing plan.

New technology makes exploitation of the higher 12/14 GHz frequency bands economically feasible. Much wider 18/30 GHz bands are expected to be available within the next decade. Technological advances can also make more intensive use of the 4/6 GHz bands possible.

This proceeding will entail a long range review of such matters as introduction of higher capacity satellites employing greater frequency re-use and scanning spot-beam techniques. The use of higher frequency bands and other means to maximize economic incentives for carrier use of the most efficient technology available to satisfy growing consumer demand in a competitive market with minimal regulatory intervention also will be considered.

Alaska Bush Earth Stations (CC Docket 80-584)

In February 1984 the FCC released its final decision establishing joint ownership of earth station facilities used to provide basic message telephone service in rural Alaskan Bush communities. This resolves a long-standing controversy between local exchange operators and Alascom, Inc.

Since 1977 the FCC has received numerous applications from local exchange carriers to construct new earth stations essentially identical to Alascom's, or simply to acquire existing Bush stations from Alascom.

Each of these applications is mutually exclusive on economic grounds with Alascom's application. (Since one earth station could provide all of the services needed there does not appear to be any public interest benefits from construction of duplicative facilities in the Bush.)

Finding that the record in this proceeding did not support the selection of either the local exchange operator or Alascom, Inc. to be the sole licensee of the Bush stations, and since each had different strengths and weaknesses, the agency reasoned that joint ownership would allow these factors to complement each other.

Multipoint Distribution Service

The Multipoint Distribution Service (MDS) uses microwave radio frequencies to distribute information, mostly pay television programing. Since the Commission established the service in 1974, the demand for licenses in the larger metropolitan areas has outstripped the available spectrum (2150-2162 MHz). Besides television programing, music (audio only) is transmitted via subcarrier on several systems, and the vertical blanking interval of the television signal can be used to transmit Videotext.

The original allocation provided for a maximum of two channels in each service area. In May 1983, the Commission reallocated eight channels in the 2500-2690 MHz band from the Instructional Television Fixed Service (ITFS) to MDS. The reallocated channels are assigned in groups of four channels each, thereby creating a multichannel MDS service. In the same proceeding, ITFS licensees were authorized to lease any excess capacity that was available on their facilities. This action should stimulate the growth of the ITFS by providing needed capital.

On Sept. 9, 1983, the FCC received approximately 17,000 multi-channel MDS applications. On Nov. 21, 1984, the Commission voted to use a lottery, with diversity preferences, to select multichannel MDS permittees. When a significant number of multi-channel MDS facilities have been constructed, it is likely that the service could compete with cable television systems in some areas. Some multi-channel MDS permits were awarded in 1984.

Radiodetermination Satellite Service

In March 1983, the Geostar Corporation petitioned the FCC to allocate spectrum for developmental operation of a radiodetermination satellite service, and submitted applications for authority to construct and launch the proposed satellite system. The system would allow subscribers throughout the continental United States to determine latitude, longitude and altitude and to exchange brief coded messages using inexpensive hand-held transceivers.

Based on the favorable comments received in response to the Geostar proposal, in September 1984 the FCC proposed allocating frequencies for the radiodetermination satellite service and to establish associated licensing policies and procedures. The agency also proposed that multiple radiodetermination systems be able to share the same orbit and spectrum and to operate independently to provide radiodetermination satellite services on a competitive basis. To expedite initiation of this service and to provide a concrete framework for the establishment of any technical rules necessary to implement its proposed multiple entry policy, the Commission concurrently accepted Geostar's application for filing and invited other applications for radiodetermination satellite systems to be considered with Geostar's.

Cellular Mobile Communications (CC Docket 83-1096)

During FY 1984 at least one carrier was licensed to provide cellular service or authorized to construct facilities to provide such service in each of the top-90 markets. A total of 112 cellular carriers were granted construction permits or licenses through October 1984.

During the fiscal year the Commission released a list of all remaining Metropolitan Statistical Areas (MSAs) and New England Consolidated Metropolitan Areas (NECMAs) for which applications for cellular service would be accepted and, shortly thereafter, applications were accepted for markets 91-120. More than 5,200 applications were filed for these markets.

Screening these applications began toward the end of the fiscal year and is expected be concluded in early 1985. Those applications meeting minimum standards, as set forth in the Commission's rules, will be accepted for filing or, lacking certain required information, will be returned to the applicants at the end of the screening cycle. It is expected that there will be petitions for reconsideration filed by many of those applicants whose applications were not found acceptable and the agency expects to act on those petitions before a lottery is held.

The adoption of a lottery procedure for the granting of cellular licenses, although still under petitions for reconsideration, has greatly relieved the administrative burden on both the Commission and the large number of cellular applicants. It is expected that settlement agreements, resulting largely from the impetus of the lottery rulemaking, will result in a competitive cellular environment in the top-90 markets in the near future and, eventually, in service to markets below 90 in a far more expedient manner.

Since markets 91-120 (Round 4) are the first round of cellular filings under the new lottery procedures, actions taken in this round will set the precedents upon which decisions in future rounds will be based. Since few precedents now exist, it is expected that Round 4 will take longer to complete than future rounds—largely because of the petitions which will probably be filed at every step of the proceedings. Once Round 4 has been completed, however, it is expected that cellular service to the remaining MSAs and NECMAs will be authorized in a very expeditious manner.

One-Way Signaling in the 900 MHz Band (CC Docket 80-183)

The Commission completed its allocation of spectrum in the 928-941 MHz band for one-way signaling (paging) in the Domestic Public Land Mobile Radio Service (DPLMRS) and the private services. This allocation provides substantial spectrum relief for users of paging services. The FCC allocated 1 MHz each for common carrier paging (931-932 MHz), private paging (929-930 MHz) and for reserve (930-931 MHz). Three of 40 common carrier channels were designated for nationwide or regional paging, and grants for licenses for these channels are being made by random lottery procedure.

Sixteen applications were received for this service, and three have been chosen by lottery to be licensed as network organizers for the nation. Final disposition of petitions for reconsideration of the Commission's decision, as well as petitions against the lottery winners, will be addressed in the near future.

Processing of Facilities Applications

The number of applications granted during FY 1984 for new or modified point-to-point microwave facilities was 8,596; 1,785 applications for new or modified earth stations also were granted.

Microwave is used extensively to provide telephone and other communications services between cities and is beginning to be used for local distribution. Earth stations are used extensively to distribute video and audio program material by domestic satellite, as well as other types of specialized communications services.

Digital Electronic Message Service (CC Docket 79-188)

The FCC created the Digital Electronic Message Service (DEMS) to permit the establishment of nationwide common carrier digital telecommunications networks to provide for the high-speed, end-to-end, two-way transmission of digitally encoded information.

The Commission allocated 130 MHz in the 10.6 GHz band for the digital electronic message service, including 100 MHz for digital termination systems and 30 MHz for internodal links. It set aside part of that spectrum (70 MHz) for extended networks—those serving 30 or more Standard Metropolitan Statistical Areas.

An additional 100 MHz was made available for digital termination systems at 18 GHz in September 1983. After a brief freeze on applications, the 18 GHz spectrum was reopened on a final channelized basis in August 1984.

To date, 22 applicants have received authority to construct extended or limited networks, and licenses have been filed for 10 digital termination systems. In April 1984 the FCC permitted the first Bell Operating Company to offer DEMS, granting Chesapeake & Potomac Telephone Co. of Virginia authority to construct facilities in Richmond and Norfolk.

International Activities

Intelsat

The membership of the International Telecommunications Satellite Consortium (Intelsat) at its 1984 level was 109 countries. The United States is a member of Intelsat and is represented on the Board of Governors by the Communications Satellite Corporation (Comsat). Currently, four Intelsat V satellites are in service in the Atlantic Ocean Region (AOR)—as the primary path, two major path, and the Intelsat Business Service (IBS) satellites; two Intelsat V satellites are in service in the Indian Ocean Region (IOR)—as the primary and the major path satellites; and one Intelsat IV-A is in service in the Pacific Ocean Region (POR).

Some of the operational satellites also are used to provide countries with leased transponders for domestic use. In addition, there are a number of Intelsat IV and IV-A satellites that have been replaced by Intelsat V satellites.

The current generation of satellites is known as the Intelsat V. During FY 1984, three Intelsat Vs were launched, bringing the number in orbit to eight. Five are used in the AOR as primary path, major paths I and II, IBS satellites and their spares; three are used in the IOR as the primary and major path satellites and their spares.

Intelsat has purchased nine Intelsat V spacecraft to provide initial operational needs, with a reserve to protect against launch failure. (Intelsat figures a launch failure rate of 25 percent, but to date eight out of nine launches of the Intelsat V have been successful.)

Intelsat V provides nearly twice the capacity of Intelsat IV-A by use of the 11/14 GHz bands as well as the 4/6 GHz bands and by the reuse of frequencies permitted by the technique of dual polarization and the use of multiple beam antennas.

During FY 1982, Intelsat contracted to purchase six Intelsat V-A satellites, which will provide 25 percent more capacity than the V series and will bridge the gap between saturation of the AOR and IOR Intelsat V satellites and the introduction of the first Intelsat VI satellite planned for 1986. During FY 1983, Intelsat amended this contract to include business service modifications in the last three Intelsat V-A satellites, and named them Intelsat V-B satellites.

IBS was introduced on Oct. 1, 1983. This service, one of the several new services recently introduced by Intelsat, will allow businesses to establish their integrated private international digital networks for voice, video, data, telex, facsimile, corporate data transfers, electronic document distribution and teleconferencing.

In March 1982 Intelsat contracted with Hughes Aircraft Company for five Intelsat VI satellites. Two will be used in the AOR (as the primary and its spare) and two will be used in the IOR (as the primary and its spare), with the fifth as insurance against launch failure. The Intelsat VI series will have a substantially larger capacity than the V or V-A satellites and a 10-year, instead of 7-year, design life.

The FCC continues to play an active role in formulating U.S. positions within Intelsat. In its facilities planning process, the FCC considered a number of potential configurations for the Intelsat VI series. Comsat was instructed to vote for the configuration that ultimately was selected, and the FCC took the lead in the instructional process.

Ownership of U.S. Earth Stations that Operate with Intelsat (CC Docket 82-540)

On Apr. 20, 1984, the FCC began a rulemaking on alternatives for modifying the current policy and rules on ownership/operation of U.S. earth stations that operate with Intelsat. Responsive pleadings have been filed.

The FCC is required to determine the entities to be licensed to construct and operate U.S. earth stations operating with the global communications satellite system as envisioned by the Communications Satellite Act of 1962. In 1966 it decided that Intelsat stations were to be jointly owned by and authorized to a consortium consisting of Comsat and those carriers providing overseas communications service to the U.S. public—the U.S International Service Carriers (USISCs).

The USISCs include AT&T, the Hawaiian Telephone Company and the international record carriers. Together with Comsat, they constitute the membership of the Earth Station Ownership Committee (ESOC).

Under the ESOC agreement, Comsat has 50 percent ownership and operates as manager of the earth stations; the other carriers have the remaining 50 percent interest. ESOC formulates policy and makes major decisions concerning the design, construction, establishment and modification of its earth stations.

In view of its decision to permit Comsat to provide international satellite services directly to end users, the Commission found it appropriate to consider revising ESOC ownership and operation policy.

The FCC tentatively concluded that the policy should permit individual and/or joint ownership of general purpose and/or special purpose earth stations by authorized U.S. carriers independent of the existing ESOC arrangement. It also tentatively concluded that Comsat should file cost-based tariffs for Intelsat space segment usage through the World Systems Division and file earth stations tariffs through a separate subsidiary acting as an international service carrier.

The agency solicited further comments on application criteria, the potentiality of traffic and revenue diversion, and carrier/public input into the instructional process.

Regulatory Policies Concerning Direct Access to Intelsat Space Segment (CC Docket 82-548)

On Mar. 30, 1984, the FCC terminated its inquiry on whether to grant the USISCs "direct" access to Intelsat space segment facilities via Comsat.

The inquiry focused on whether new arrangements for access to the space segment were necessary to enable the USISCs to compete on equal financial terms with Comsat in view of the FCC's decision permitting Comsat to serve the public directly.

Based on review of the pleadings submitted, the Commission concluded that the potential public benefits of the direct access proposals advocated by parties were not sufficient to justify a departure from the long-established policy that Comsat, as U.S. Signatory to Intelsat, is the sole U.S. entity which may invest in Intelsat satellite facilities and that the international carriers must lease such facilities from Comsat in order to provide service to the public.

Comsat Structure Rulemaking (CC Docket 80-634)

On Aug. 5, 1982, the Commission found that the changes in Comsat's structure and operations which the corporation had previously voluntarily undertaken did not fully address the FCC's concerns with respect to: misallocation of research and development and shared administrative costs; the need to ensure that Comsat's investments in competitive ventures do not threaten its ability to meet Intelsat/Inmarsat financial obligations or otherwise unfairly burden the ratepayer; and Comsat's use of Intelsat/Inmarsat information to benefit its competitive ventures to the exclusion of competing firms. In 1983, at the direction of the Commission, Comsat established accounting and information flow procedures.

On Mar. 30, 1984, the Commission found these procedures inadequate and ordered Comsat to modify its accounting practices by: using a "cash expenses" formula to allocate Comsat's shared general and administrative (G&A) and research and development (R&D) expenses and capital costs between its regulated ("jurisdictional") and competitive ("nonjurisdictional") lines of business; by including the expenses of Comsat's partnerships and joint ventures in the cost allocation formula; and by excluding from the formula costs incurred in the performance of Intelsat R&D contracts.

In 1984 Comsat, M/A-COM, Inc. and United Satellite Action filed petitions for reconsideration. Finding no merit to the assertions that the public interest required divestiture of Comsat's nonjurisdictional lines of business, the Commission on Nov. 21, 1984, denied the petitions of M/A-COM, Inc. and United Satellite Action. Granting Comsat's petition in part, the FCC authorized Comsat to utilize a "gross operating expenses" formula, rather than the earlier prescribed "cash expenses" formula, to allocate shared G&A and R&D expenses and capital costs among the various elements of the corporation.

Comsat Consolidated Capitalization Plan, 1984-1986

In December 1983 Comsat submitted the first of its annual updates of the long-term financing plan initially approved by the Commission the preceding June.

In August 1984, Comsat submitted revisions to these updates reflecting anticipated changes in the corporation's structure and operations, including the proposed sale of its entire partnership interest in the Satellite Business Systems (SBS) joint venture and the acquisition of majority partnership for Satellite Television Corporation (STC), the subsidiary Comsat had established to participate in the direct broadcast satellite market.

In November 1984 prior to Commission action on its capitalization plan, Comsat announced its intention to cease its DBS activities. In light of this development and its continuing efforts to remove itself from the SBS joint venture, Comsat requested permission to file further revisions to its 1984-1986 capitalization plan. The FCC granted this request. Comsat expects to submit its revised capitalization plan in early 1985 for the Commission's review and acceptance.

International Facilities Planning (CC Dockets 79-184, 81-343, and 83-525)

Consultations on North Atlantic facilities matters began in 1974 among the Commission, other U.S. government departments concerned with international telecommunications, the USISCs, Comsat and the Canadian and European telecommunications entities.

The FCC uses notices of inquiry and rulemaking proceedings together with the consultative process to develop guidelines for use by the USISCs and Comsat in negotiating agreements with foreign correspondents for the construction and use of facilities on North Atlantic routes.

These procedures were used to address North Atlantic facility needs for the 1985-1995 period. The FCC participated in two working groups and three senior level meetings of the North Atlantic Consultative Process during 1979 and 1980.

In January 1981 the FCC issued guidelines (CC Docket 79-184) for the USISCs and Comsat in planning North Atlantic facilities for 1985 through 1992. The Commission found that a digital optical fiber cable, operational as early as 1988, would serve the public interest and that either of the two designs for the proposed Intelsat VI series would be acceptable.

The FCC also found that an additional analog cable would be acceptable only if the best information on hand when decisions must be made to permit construction of a new cable to be available no earlier than 1988 indicates that unacceptable delays in development of the digital optical fiber cable and the Intelsat VI satellites are expected.

Consideration of the method for distributing traffic among available facilities was deferred, as was consideration of the provision for restoring service following a major facility failure, the specific configuration of facilities for the 1985-1992 period and the facilities required for 1992-1995.

A senior level consultative process meeting was held in February 1981 to discuss the FCC's decision and to address the deferred questions. A meeting of the North Atlantic Consultative Working Group was held in November 1981 to exchange and discuss information on the deferred issues. This information and the status of the digital, optical fiber TAT-8 cable and the Intelsat VI satellite program were discussed at a senior level meeting held in July 1982.

A meeting of the North Atlantic Consultative Working Group was convened in late January 1984 and a senior level meeting of the consultative process was held in late March 1984 to exchange and discuss information on the progress of the TAT-8 and Intelsat VI programs and to consider a schedule for developing the policies for the distribution of circuits among North Atlantic facilities in the post-1985 period.

In February 1984 the USISCs filed an application requesting authority pursuant to Section 214 of the Communications Act to participate in the construction and operation of a digital, optical fiber TAT-8 cable having two working fiber pairs and landing points in the United States, the United Kingdom and France. The Commission granted the carriers' application in May 1984. It also granted Comsat's application to participate in the construction of five Intelsat VI satellites in May 1984.

On Aug. 3, 1984, the Commission released a third inquiry notice in CC Docket 79-184 opening its procedure for developing policies for the distribution of circuits among North Atlantic facilities during the 1986-1991 period. The FCC indicated it would follow a schedule which permitted the adoption of a new policy by mid-1985. A series of public meetings was begun to prepare the U.S. submission to a meeting of the North Atlantic Consultative Working Group scheduled for January 1985.

The agency also found that the public interest would be served by the carriers' acquisition of ownership interests in 518 half-circuits in the segments of the ANZCAN cable between Hawaii, Fiji, New Zealand and Australia and by utilization of Intelsat's Pacific Ocean Region in-orbit spare as an operational space satellite during the mid-1980s.

The master plan for circuit routing and incorporation of the shortfall/longfall approach proposed by AT&T to accommodate deviations from forecasted traffic levels was found to be reasonable. The FCC concluded that USISC circuits and Hawaiian Telephone Company private line circuits should be exempt from any specific loading criteria. In a June 16, 1983 decision, the Commission reconsidered its report and order and decided that the public interest would be served by the USISCs' acquisition of ownership in an additional 60 half circuits in the Canada-Hawaii segment of the ANZCAN cable.

The FCC directed Comsat and AT&T to file updated information on the status of facilities planning in the Pacific, and on Nov. 8, 1983, the agency began an inquiry on the second phase of the planning process to address facilities requirements and options for 1987-1995.

On Nov. 21, 1983, the FCC began an inquiry on Phase II of the planning process dealing with developing policies for cable and satellite facilities in the POR during 1987-1995.

On May 26, 1983, in CC Docket 83-525, the Commission initiated use of a comprehensive process for addressing facilities needs and options in the Caribbean Region for the 1985-1995 period. Public meetings were held to develop and discuss planning information and alternative plans for the Caribbean. The USISCs and Comsat submitted a number of alternatives for consideration.

Authorized User Status (CC Docket 80-170)

In its 1966 Authorized User decision, the Commission generally limited Comsat to the role of a "carrier's carrier" providing satellite circuits to other carriers for their use in providing service to the public.

On reexamining that decision, the FCC found that the Satellite Act does not bar Comsat from providing service directly to end users but leaves the question of the scope of Comsat's operations to the discretion of the Commission. Thus, the FCC found that the public interest would be served by allowing Comsat to lease satellite circuits (basic transmission capacity) directly to users at U.S. earth stations under the same terms, conditions and rates as Comsat offers those circuits to carriers.

The agency also found that Comsat is eligible to provide end-to-end services such as those offered by existing carriers. It concluded that competition from a well-financed competitor such as Comsat would benefit users.

However, recognizing that Comsat's position as U.S. Signatory to Intelsat gives it power to engage in anticompetitive conduct, the FCC required Comsat to offer any end-to-end services through a corporate affiliate separate from its Intelsat and Inmarsat operations.

The Commission directed Comsat to file amendments to its authorizations to implement the modified policy and to remove from its tariffs any restrictions limiting service only to communications carriers.

The Court of Appeals for the D.C. Circuit vacated and remanded the Commission's decision for further proceedings. The court expressed no opinion on the merits of the agency's revised authorized-user policy, but directed the FCC to consider some related issues before implementing its policy. The Commission has issued a further rulemaking notice to consider those issues and is now considering the responses to that notice.

The Record Carrier Competition Act of 1981

The Record Carrier Competition Act of 1981 (RCCA) governs certain aspects of the provision of record communications services within the United States and between the United States and foreign points. The major provisions of the RCCA govern the manner by which carriers interconnect their facilities and allocate revenues for the provision of record communications services. The majority of these provisions end Dec. 29, 1984.

On Mar. 7, 1984, the United States Court of Appeals for the District of Columbia Circuit rendered a decision concerning the FCC's implementation of the RCCA. The court reversed and remanded for further proceedings two aspects of the FCC's interim order. On Aug. 6, 1984, the FCC issued a further rulemaking to treat those issues remanded by the appellate court. The FCC reached tentative conclusions as to those issues and requested comments on its tentative conclusions.

In response to the further notice, the carriers filed an executed "Memorandum of Agreement" on Sept. 27, 1984, which established terms and conditions regarding physical interconnection, billing, collecting and tariffing for telex services. The agreement formalized the parties' respective obligations and undertakings in this regard. In addition, the carriers filed a "Supplemental Petition for Acceptance of Intercarrier Agreement." In this petition, the carriers requested that the Commission revoke or waive the existing prescriptions so that the agreement may become operative prior to the statute's sunset date and continue until June 30, 1986.

Complaints, Investigations and Litigation

Complaints

The Enforcement Division handles formal and informal complaints and inquiries involving common carriers.

Generally, informal complaints are received from residential or business customers, although some complaints are received from carriers. A large volume of congressional correspondence forwarding constituent complaints also is handled.

Formal complaints are filed with the FCC by customers and carriers alike in lieu of bringing suit in a federal court, and must set forth a violation of the Communications Act. While these complaints concern a wide range of alleged carrier misconduct, the majority of cases involve compliance with Sections 201-203 of the Act and generally concern whether a carrier's rates or practices are unjust, unreasonable or discriminatory or involve the propriety or accuracy of a service charge or billing practice. In addition, pole attachment rate complaints may be filed pursuant to Section 224 of the Act.

During 1984, the division received and handled 20,000 written complaints and inquiries and 7,900 telephone inquiries. It also received 77 new formal complaint filings, some of which involved intra-agency appeals of existing cases and included 39 pole attachment complaints. The division resolved 146 complaint matters including 108 pole attachments.

Investigations

During FY 1984, the formal complaints branch handled a number of special projects. Most significant were two investigations completed during that period.

On Feb. 14, 1984, United Telecommunications, Inc., and U.S. Telephone, Inc., filed an application for consent to transfer control of U.S. Telephone's licenses for intercity telephone and domestic radio services to United. The Commission found the proposed merger in the public interest and approved the acquisition on June 15, 1984.

In February 1983 Satellite Business Systems filed a petition requesting removal of certain marketing restrictions imposed on it by the Commission in 1977 as a condition for approval of its license to operate. These conditions prohibited: IBM (a part owner of SBS) from selling or promoting SBS services; SBS from selling or promoting IBM products; and both IBM and SBS from giving joint marketing presentations. Concluding that continuation of the marketing restrictions would not be in the public interest, the Commission granted the petition on May 10, 1984.

Litigation

The primary common carrier litigation during the fiscal year involved cellular radio proceedings in the top-30 markets and the Graphic Scanning case (CC Dockets 82-587-590). With respect to cellular radio, the agency's Administrative Law Judges issued initial decisions in 14 non-wireline cellular radio proceedings during the fiscal year: New York, Los Angeles, Dallas, Houston, Miami, Atlanta, San Diego, Denver, Tampa, Cincinnati, Kansas City, Phoenix, New Orleans and Portland. In addition, two cases (San Francisco and San Jose) were settled after hearings were held. The Commission heard oral argument in the Pittsburgh and Chicago proceedings, and issued final decision in those markets as well as in Portland and Seattle.

In CC Dockets 82-587-590, the FCC is investigating whether Graphic Scanning Corporation is the real party-in-interest in numerous applications for paging services filed by four applicants. Also at issue is whether these parties engaged in misrespresentation or lack of candor. More than 60 days of hearings were held (in addition to extensive depositions) and issuance of an initial decision is pending.

The Commission took action in two proceedings which were begun in previous periods. In CC Dockets 82-15-17, it upheld the Review Board's decision that a DPLMRS licensee in Little Rock, Ark., had engaged in misrepresentation and lacked candor in his dealings with the FCC. It denied renewal of various licenses and related applications. In CC Dockets 78-314-315, the Commission denied a complaint (and claim for damages) by Rogers Radio Communications Service, Inc., against Illinois Bell Telephone Co. and AT&T concerning the lawfulness of the telephone companies' refusal to provide WATS service to Rogers to automatically answer one-way paging calls.

General

The Field Operations Bureau (FOB) is the Commission's primary point of contact with the public. Personnel located at headquarters, district offices and monitoring stations throughout the country interact with consumers, radio communications users, and the telecommunications industry through public service and enforcement activities.

Field activities are directed through six regional offices. Program development and policy is the responsibility of the Enforcement, Public Service and Engineering Divisions.

Enforcement

Inspection of radio stations, resolution of interference problems, and constant monitoring of the radio spectrum to ensure that channels remain usable and free of interference are the responsibility of the Enforcement Division.

During FY 1984, 8,640 on-scene responses were completed, including 2,828 inspections of ships equipped with radios required by law or treaty. Also, the field facilities instituted a signal sampling program in 10 radio services and on all radio frequencies in order to develop indicators of problem areas where enforcement efforts should be directed.

Assistance was provided throughout the year to other agencies involved in preserving the safety of life, including the White House Communications Agency and the U.S. Coast Guard.

The bureau provided communications support at three major national events. At the two political conventions and the Summer Olympics, regional personnel established command centers from which they investigated and resolved interference problems. This involved comprehensive planning and coordination by the staff members of several regional offices. There were no major interference cases and minor difficulties were resolved rapidly without disruption of communications.

As part of the data gathering process used in considering a petition by the Los Angeles County Sheriff's Office for additional radio spectrum, FOB conducted an occupancy study of the frequencies assigned for the Sheriff's use. FOB personnel carried out non-stop automated monitoring in the Los Angeles area for a period of five weeks. Data was compiled from over 200,000 recorded individual occupancies. The results of the data showed that the channels were less occupied than indicated in the Sheriff's petition and this factor was considered in deliberating the merits of the petition.

Throughout the country there was a strong resurgence of pirate broadcasting activity. Pirates are individuals who operate unlicensed stations on the AM band. They typically broadcast late at night from private residences and use unusual identifiers such as "Radio Free Insanity," "Radio Mambi," or "KQRP Family Radio." The monitoring net is alerted to provide fixes on these clandestine transmissions. It is difficult to identify violators because of the nature of their broadcast operations. Several violators, including two of the worst offenders, "KPRC Pirate Joe" and "Radio Free Insanity" were identified and shut down.

As specified by the Radio Broadcasting to Cuba Act, the bureau made an extensive study of Cuban AM broadcast station signals. Comparison of this information with the data from the International Frequency Registration Board showed many substantive discrepancies. FOB prepared a report that contained detailed channel by channel information about the actual frequencies, locations, and operating powers of Cuban broadcast stations.

Radio frequency (RF) devices must be authorized by the FCC, thus indicating compliance with technical standards. FOB continued its marketing survey of RF devices to verify proper authorization. The survey was conducted across the country by field personnel. During 1984, FOB staff members visited over 800 stores and retail outlets and inspected more than 24,000 devices. The overall violation rate was approximately 10 percent nationwide. The majority of violations were for cordless telephones, computers and computer peripheral devices.

To curb the importation of RF devices which do not meet Commission technical standards, the agency requires importers to file FCC Forms 740 stating that each shipment of RF devices brought into the country complies with FCC rules. FOB performed a computer study that supported the findings of the 1983 pilot program where it was found that 80 percent of shipments of RF devices did not have the necessary documentation and that importers often failed to file any form for unauthorized RF devices.

During FY 84, the bureau expanded its program to deal with that problem. Form 740 was revised to facilitate its use, and an educational effort was launched to help importers become aware of importation requirements. Also, with the assistance of the U.S. Customs Service, FOB initiated an inspection program at entry ports to raise the compliance level of importers in submitting the Forms 740. It is expected that these efforts will further limit the importation of many illegal devices into the country.

FOB monitoring stations have been collecting data that reflects the extent to which international broadcast stations are receiving intentional interference. This effort was undertaken because of an International Telecommunications Union resolution calling for administrations to provide such information. It is expected that FCC involvement will continue for at least two more years.

The certification interval for small passenger vessels subject to Title III, Part III of the Act, was extended from 2 to 5 years. As part of the expanded interval, FOB and the U.S. Coast Guard (USCG) agreed in a Memorandum of Understanding that USCG inspectors would conduct operational tests of shipboard transmitting equipment used to meet the compulsory requirements of the Act. Manpower savings will be used to bolster marine enforcement.

The bureau conducted a year-long survey and test of all Emergency Position Indicating Radio Beacons (EPIRBs) carried on U.S. ships. The testing was in response to a National Transportation Safety Board report that EPIRBs have failed to activate during marine capsizings. An interim report indicated a design problem.

In two separate incidents where private aircraft were lost and out of radar range, FOB's direction finding system located the planes resulting in their safe landing.

The Field Operations and Mass Media Bureaus established a Statement of Policy authorizing FOB to issue Notices of Apparent Liability to mass media licensees providing for the assessment of forfeitures up to $2,000 for willful or repeated rule violations.

Public Service Division

FOB's public service program consists of public contact, antenna survey and radio operator license functions.

Public Contact

Assistance is provided to the public and radio users through general contact, group meetings/conferences, publications distribution, special projects and radio or television appearances.

During Fiscal Year 1984, field public service staff responded to 405,000 inquiries and 90 percent of the 70,000 interference complaints received. Complaints, other than those involving complex technical matters, were resolved without formal enforcement actions.

The first year of the seasonal Marine Education Project in the Gulf of Mexico/Mississippi River area was completed with marked success. Efforts to resolve safety-related interference problems caused by shrimp boat operators involved intensive education, monitoring and enforcement activities. Multi-language information regarding the proper use of marine communications equipment was distributed in coordination with the U.S. Coast Guard, local governments, vessel owners and the industry. Preliminary evaluation of the project indicated a decrease of interference in the marine service as well as reduction in the number of safety problems. For example, misuse of high power on bridge-to-bridge frequencies in the New Orleans area dropped from 90 to 10 percent.

In response to complaints about interference caused by power company equipment, a model seminar was designed for utility companies, in conjunction with industry representatives and the Electronic Industry Association (EIA). Seminars were held for regions most affected by electrical interference. Programs were held in Delaware and Florida, with attendance from tri-state/county areas. The seminars consisted of:

—dissemination of printed information on how to locate and resolve electrical interference;

—a slide presentation and CRT simulation of electrical interference; and

—hands-on training using new interference locator accessories.

Specific attention was given to the problem of interference from cable systems. In order to assist cable operators in preventing interference, a cable TV checklist was distributed to system operators and cable company owners. The checklist provided clarification of their responsibilities under Part 76 of the rules.

Public service staff in the field also contributed to the support provided by the FCC to the political conventions and the Olympics. As an initial step toward preventing and alleviating major communications problems, contact representatives made preliminary determinations of the communications needs of other agencies and devised a complaint handling procedure to be used during events. Additionally, their responsibilities included manning a central point for receiving interference complaints from radio users/participants and providing technical advice for resolving interference problems.

Antenna Survey

During FY 1984, 37,222 radio license applications were analyzed to ensure compliance with the antenna marking and lighting requirements as prescribed in Part 17 of the rules.

Some 3,841 applications were referred to the Federal Aviation Administration, and the Commission prescribed marking and lighting requirements for 4,344 antenna structures.

Radio Operator Licensing

Certain radio operators are required to be licensed in accordance with the International Radio Regulations, the Communications Act of 1934 and FCC rules. Examinations for radio operator licenses are conducted regularly at field offices and at other locations.

During the fiscal year, 25,156 examinations were conducted for commercial radio operator licenses and 24,543 for amateur operator licenses. Also, 37,388 commercial radio operator licenses were renewed, 3,854 applications for the marine radio operator examination were received, and 29,543 verification cards and 711 amateur extra class certifications were issued by the field offices.

Engineering

The Engineering Division supports the bureau's enforcement and public service functions with the Standards and Facilities Branch in Washington, D.C., and the Equipment Construction and Installation Branch (ECIB) in Powder Springs, Ga.

The Standards and Facilities Branch establishes technical measurement procedures, develops equipment specifications and sources and provides facilities for monitoring stations and field offices.

ECIB designs and constructs specialized equipment for field use that cannot be purchased "off the shelf" or economically contracted for in small lots. It also has a patent program to protect the government's investment in unique devices developed by the branch.

General

The Private Radio Services promote the use of radio spectrum to fulfill the communications needs of businesses, state and local governments, aircraft, ships and individuals. Over two million licensees use radio to promote safety of life and property, to increase productivity and to advance the science of telecommunications. Specific functions include evaluation of new technologies, determination of appropriate utilization levels for assigned spectrum, resolution of interference between licensees and issuance of authorizations.

Public demand for Private Radio Services continued to grow during FY 1984. The most dramatic growth was in the 800 MHz Radio Service where authorization requests increased by 70 percent over the previous year. Substantial growth also was experienced in the Private Operational-Fixed Microwave Service (69 percent); Land Transportation Service (35 percent); Public Safety Service (28 percent) and the Industrial Service (26 percent).

The bureau continued its efforts to eliminate "warehousing" and "paper loading" of channels to assure utilization of scarce land mobile radio spectrum. A lottery was held in two areas of the country on June 29, 1984, to select licensees from competing applicants for Specialized Mobile Radio (SMR) 800 MHz channels.

Dual benefits were obtained from a new program allowing volunteer examiners to give examinations for amateur operator licenses above the Novice class—examinations are more readily available to the public and the cost of the Commission examination program has been substantially reduced.

Licensing

Steps were taken to improve licensing procedures and provide better service to the public. The staff developed computer programs to review and process complex mutually exclusive microwave radio applications and to optimize the number of license grants which can be made in cities where there are mutually exclusive 800 MHz land mobile applications. The first lottery for SMR channels was conducted June 29, 1984, to select licensees from among competing applicants in Detroit and Cleveland. The staff was able to assign frequencies to 58 of 82 pending applications. This result exceeded industry predictions and expectations.

Two automated renewal notice programs were implemented which resulted in improved service to the public by informing licensees of the need to renew their authority to operate. The automated renewals for the Land Mobile and General Mobile Radio Services were so successful that the implementation for other radio services was accelerated by two months. The automated renewal notice program for the Private Operational-Fixed Microwave Radio Service was successfully implemented in July 1984. These programs will significantly reduce the instances of unauthorized radio operations, reduce requests for Special Temporary Authority, improve the quality of license data, increase productivity of the processing staff and provide better service to the public.

A study on automating the U.S./Canadian frequency coordination procedures was initiated. It was determined that substantial time could be saved by using an electronic mail system. This system was placed in operation in January 1984. Frequency coordination requests are transferred between the countries via the mail system, which ensures secure communications. With the use of the electronic mail system a coordination request is received the same day it is transmitted. With a manual system, approximately two weeks of postal transit time was required for each request. The Canadian Department of Communications, as part of its commitment to improve speed of service, is also installing new computer systems to expedite coordination for Canadian processing of

U.S. requests. Additional system evaluations will be conducted in the future.

Considerable progress was made, including the purchase, installation and programing of a microcomputer, to expeditiously resolve technical aspects, complete engineering review, determine mutual exclusivity status and dispose of applications filed in response to Docket 19671. Due in part to Docket 19671, microwave application receipts increased 69 percent during this fiscal year over FY 1983. Through streamlining efforts, the information collected on the revised FCC Form 402 will be reduced by 30 percent with accompanying printing cost savings.

Detailed requirements were developed for the redesign of the existing Aviation and Marine Automated Application Processing Systems. The studies identify the data entry, computer processing and output requirements necessary to generate a license, fulfill international reporting requirements, respond to public inquiries, generate renewal notices to existing licensees and provide statistical data to management for planning and budgetary purposes. These studies complete the initial phase for redesigning, developing and implementing these new systems.

On Dec. 1, 1983, a new program was adopted allowing volunteer examiners to give examinations for amateur operator licenses above the Novice class. With the implementation of this new program, FCC Form 610, Application for Amateur Radio Station and/or Operator License, was completely revised to accommodate the new requirements and released to the public Sept. 18, 1984. Implementation of this program will make examinations more readily available to the public, eliminate the cost of the agency's examination program and streamline application processing functions.

In July 1984 a 30-day test allowing the public automated access to license data was conducted. Public usage of certain restricted access files was monitored and analyzed with regard to the type and number of inquiries made to determine whether permanent public access would be feasible and cost-effective. The analysis concluded that files remained secure and data in the files was protected. In September 1984 the experiment was extended for 6 months.

The key entry workload for the Aeronautical Frequency Processing System (AFP) was transferred to the Gettysburg facility on Jan. 26, 1984. The total pending workload of 5,000 applications was eliminated in less than 6 months. This allowed scarce resources to be used in other areas of the application processing activity. The Gettysburg facility also assumed the responsibility for keying 25,000 low power TV (LPTV) applications and 2,000 cable TV licenses.

A Honeywell DPS6/74 minicomputer was installed at the Gettysburg facility January 1984. Analysis of programs on the existing ENTREX data entry system began and programing was started to convert the data entry function from the ENTREX to the new computer. At the end of FY 1984, five ENTREX systems were in various stages of conversion and the first full production run of the converted amateur system was scheduled for Oct. 1, 1984. During the year, data entry conversion for the review list was also completed. Conversion of the microwave data entry system proceeded through the analysis phase and is nearing completion of the development phase. Fifteen unique data entry scree , formats were developed and 10 programs written for the system.

Improved responsiveness to the public was achieved by conducting a Land Mobile Seminar on Dec. 15, 1983, concerning the instructions for preparing the new FCC Form 574, Application for Radio Station Authorization in the Private Radio Services. Representatives from industry, frequency coordinating organizations and law firms attended. Although a follow-up seminar was scheduled, application return rates did not rise to unacceptable levels, even with the introduction of the new form, so the seminar was not needed. At the end of FY 1984 land mobile return rates were well below internal agency goals.

A timely response was made to each Congressional and public inquiry. All of the 570 Congressional inquiries received were responded to within 24 hours. Responses to all 78,200 telephone and other public requests (walk-ins) also were handled within 24 hours. Responses to the 125,900 written inquiries received averaged less than 7 workdays.

Finally, a commitment was made to provide assistance in relocating Microwave Radio Service users due to Direct Broadcast Satellites (DBS).

Requests for relocation were given special attention and were processed expeditiously.

These improvements have resulted in considerable gains in the agency's continuing efforts to serve the public more expeditiously and efficiently at a time when many additional processing requirements were being imposed on the Gettysburg, Pa., facility.

During the year, the speed of service for all radio services was maintained at acceptable levels, resulting in a significant decrease in inquiries from the public on the status of their pending applications. Land mobile application processing procedures were streamlined, resulting in a 50 percent improvement in speed of service. Detailed statistics are in the appendix to this report.

Aviation and Marine Services

General

The Commission regulates the Marine Radio Services for the safety and operational communications of non-federal maritime activities, including U.S. vessels that traverse international waters and land stations in the Maritime Mobile Radio Service. The agency also regulates nongovernment use of radio for aeronautical radionavigation, search and rescue and other related operations and safety functions, including radiocommunications for United States civil aircraft on international flights. The Aviation Radio Services include 17 classifications of aircraft and ground stations. Administration of these services requires continuous coordination with the participation in activities of other government agencies, many technical and advisory groups and international organizations.

International Maritime Organization (IMO)

In March and September 1984 the Commission participated in the 27th and 28th Sessions of the Subcommittee on Radio Communications. These conferences were held to prepare for the introduction of and transition to the Future Global Maritime Distress and Safety System (FGMDSS). Among the matters taken up by the conferences were equipment performance standards for the FGMDSS and a satellite Emergency Position Indicating Radio Beacon (EPIRB) system to be used in the FGMDSS.

International Radio Consultative Committee (CCIR)

In May and June the Commission participated in the Interim Meeting of CCIR Study Group 8B on maritime and aeronautical matters in Geneva, Switzerland. This conference was held to review progress in the trial programs of the Maritime Mobile Satellite/Emergency Position Indicating Radio Beacons (EPIRBs) coordination and Digital Selective Calling (DSC) techniques for the FGMDSS. The work in these programs is to be completed for the final meeting in November 1986.

Digital Selective Calling (DSC) (PR Docket 83-431)

The FCC proposed to amend Parts 81, 83 and 87 to provide standards under which the international Radio Consultative Committee (CCIR) DSC System could be implemented in the Maritime Mobile Service on an optional basis at an early date. The DSC system is planned to be an integral part of the FGMDSS to be used by all ships on the high seas.

Great Lakes Emergency Position Indicating Radio Beacons (EPIRBs) (Gen. Docket 82-617)

The FCC expanded the use of EPIRBs to include survival craft of vessels operating on the Great Lakes as well as other vessels which the Coast Guard may require or recommend to be so equipped. These EPIRBs will aid rescue efforts and enhance the safety of vessels on the Great Lakes.

Radioprinter
(PR Docket 84-140)

Parts 81 and 83 of the rules were amended to provide for the use of shared maritime frequencies for a simple system of radioteletype for business and operational communications by vessels of less than 1600 gross tons. The option of a simple system of radioteletype versus the more complex internationally standardized public correspondence NB-DP telegraph system will satisfy the needs of smaller vessels at lower cost and provide for more efficient use of radio spectrum.

216/220 MHz Maritime Mobile Expansion
(WATERCOM II)
(Gen. Docket 84-18)

The Commission approved the expansion of the service area of automated maritime communications in the 216-220 MHz band along the Mississippi River System and the Gulf Intracoastal Waterway to include the offshore waters of the Gulf of Mexico. This expansion will broaden the diversity of service, improve maritime communications and enhance the economic viability of equipment procured for maritime use in this band.

Flight Test Telemetry Expansion
(Gen. Docket 84-186)

Parts 2 and 87 were amended by the FCC to permit the operation of aeronautical flight test telemetry stations in the 2310-2390 MHz band and clarify the technical criteria that govern their operations. This new frequency band will relieve congestion (resulting from an increase in the number and complexity of flight tests) in the 1435-1535 MHz band currently authorized for flight test telemetry use.

Radio Officer Watch Relief
(PR Docket 84-139)

Part 83 was amended to allow radiotelegraph officers during their watch to perform maintenance and repair duties away from the station's main transmitter provided they keep a listening watch on the international distress frequency (500 kHz) using headphones, loudspeakers or a remote receiver. This amendment eliminates unnecessary regulations and enhances the radio officer's value as a member of the ship's crew without adversely affecting the safety system.

Safety of Life at Sea (SOLAS) Agreements
(PR Docket 84-759)

The FCC proposed implementing the second set of amendments to the Safety of Life at Sea (SOLAS) Convention of 1974. These amendments advance safety of life at sea by requiring licensees to carry a survival craft EPIRB and a two-way radiotelephone for use between survival craft and, in some cases, between survival craft and rescue vessels.

Compulsory Ship Inspection Cycle
(PR Docket 83-428)

The FCC amended Part 83 to expand the inspection interval required for small passenger vessels subject to Title III, Part III of the Act from 2 years to 5 years, thus reducing the regulatory burden on operators of these vessels. The Commission determined that this action would not diminish the reliability of this equipment because of improvements in solid state electronics and the requirements for an operational test to be conducted during the Coast Guard's annual inspection of these vessels.

Multiple Shared Unicoms
(PR Docket 83-990)

The agency eliminated the restriction against more than one unicom (aeronautical advisory station) at controlled airports and incorporated changes enacted in Public Law 97-259 concerning aircraft station licensing. This will allow direct communications between aircraft and any number of service organizations at controlled airports, thus improving convenience without affecting safety.

Restricted Radiotelephone Operator Permit
(PR Docket 84-760)

The Commission proposed amending Parts 81, 83 and 87 to eliminate the issuance of Restricted Radiotelephone Operator Permits except in circumstances where required internationally by statute or treaty, thus relieving the public of many burden hours in paperwork.

Alaska-Public Fixed Communications
(PR Docket 83-464)

Parts 2, 81, 83, 87, 90 and 97 were amended to update and clarify the rules governing the Alaska-Public Fixed Radio Service. These rules benefit the public by reducing regulations, providing greater flexibility and increasing the efficient use of frequencies in Alaska.

Personal Radio Services

The Personal Radio Services—General Mobile (GMRS), Radio Control (R/C) and Citizens Band (CB)—offer short-range communications for personal or business activities.

New Personal Radio Service at 900 MHz
(Gen. Docket 83-26)

The Commission decided not to adopt the proposal to allocate 8 MHz of 900 MHz spectrum for a new private radio communications service (PRCS) for personal communications use. While proponents of the PRCS asserted that this service could offer the public a variety of benefits, the Commission concluded that these benefits could be achieved through other means. That being so, this additional service would be in the nature of a convenience or luxury.

Amateur Radio Service

The Amateur Radio Service is for technically inclined individuals who wish to learn about and experiment with radio communications equipment and operating techniques. Amateurs must pass examinations to qualify for their FCC licenses.

Amateur No-Code
(PR Docket 83-28)

The Commission withdrew its proposal to either delete the slow speed international Morse code requirement for the Novice and Technician class licenses in the Amateur Radio Service or establish a new Experimenter class of license with no Morse code requirement. The overwhelming majority of the amateur radio community opposed any lowering of the standards for obtaining an amateur license and felt that Morse code is an integral feature of the Amateur Radio Service that is invaluable in times of emergency or national crisis.

Early Allocation of Frequencies in the Amateur Service
(PR Docket 84-960)

The Commission proposed amending Part 97 to implement several major features of the Final Acts of the World Administrative Radio Conference (Geneva 1979) in the Amateur Radio Service. This proposed amendment would provide for early release of newly allocated 24 MHz and 902-928 MHz spectrum to the Amateur Radio Service aiding amateurs in providing emergency communications and conducting experimentation.

Reimbursement of Volunteer Examiner Coordinators (PR Docket 84-265)

The FCC permitted Volunteer Examiner Coordinators (VECs) and volunteer examiners (VEs) to be reimbursed for out-of-pocket expenses they incur in administering and coordinating Amateur Radio Service operator examinations. The Commission gave VECs and VEs maximum flexibility in collecting and sharing reimbursement fees. Collection of such fees is optional with each VEC. This implemented Public Law 98-214.

Amateur Volunteer Examiners Program (PR Docket 83-27)

The Commission permitted VECs administering Amateur examinations to design the written examination from a pool of questions developed by the Commission. This gives flexibility to the volunteer examination program and eliminates the requirement that the FCC design the exams.

Ten-Meter Repeaters (PR Docket 83-485)

The Commission withdrew its proposal to expand the 10-meter repeater band in the Amateur Service because of possible interference to Amateur satellite communications.

Private Land Mobile Radio Services

The Private Land Mobile Radio Services (PLMRS) provide for both voice and nonvoice radio communications by private enterprises for their own purposes in business and industry, state and local government, land transportation and public health and safety. The Commission authorizes base, mobile and fixed stations in 20 different services under Part 90 of its rules.

Permissible Communications (PR Docket 84-109)

The FCC proposed relaxing restrictions and expanding the types of communications permissible in the Private Land Mobile Radio Services. Licensees would determine what communications are appropriate in the furtherance of their business or local government activities and would be permitted to transmit these messages over private systems.

800 MHz Release Reconsideration (PR Docket 79-191)

The Commission prepared a brief, filed Mar. 5, 1984, with the Court of Appeals defending the agency's decision to prescribe certain application procedures for newly released 800 MHz channels and to broaden the eligibility of equipment manufacturers to operate Specialized Mobile Radio Systems (SMRS). The Commission's decision was affirmed by the Court of Appeals in November 1984.

900 MHz Release and Band Plan (PR Docket 84-1233)

The agency proposed allocating 12 MHz of the 800/900 MHz land mobile reserve spectrum for private land mobile use. It also proposed requiring the use of narrowband technology to obtain more communications capacity from the limited spectrum available.

Frequency Coordination (PR Docket 83-737)

The Commission proposed updating procedures and setting standards for frequency advisory committees in the Private Land Mobile Radio Services. The rule changes proposed would give the committees more responsibilities in the licensing process.

Technician Licensing (Gen. Docket 83-322)

The FCC surveyed the various private sector land mobile technician certification programs and reported that they appeared to be working well. The Commission will continue monitoring these programs.

Mobile Relays Below 470 MHz (PR Docket 83-755)

The Commission removed restrictions on mobile relay stations operating above 450 MHz, thereby enabling licensees in the Land Transportation Radio Services additional operational flexibility by permitting the use of these stations to enhance the coverage of their communications systems.

Forest Products Radio Service (PR Docket 83-1346)

The FCC made available 10 frequencies in the 72-76 MHz band for low-power operations on a shared basis with other industrial services. This action made available to the forest products industry some low-power mobile frequencies already available to licensees in the Manufacturers, Special Industrial and Railroad Radio Services.

Los Angeles Antenna Height (PR Docket 82-244)

The Commission modified a table of antenna height/ERP limitations that applied to the Los Angeles, Calif., area, thereby enabling users of frequencies in the 470-512 MHz band in that area to operate their private land mobile radio systems more effectively.

Narrowband Technologies (PR Docket 84-279)

A channel structure in the 150-170 MHz band was proposed to accommodate the use of spectrum-efficient narrowband technologies in all Part 90 services. These new technologies could provide communications using narrower channel bandwidths than presently required, thus creating additional communications capacity.

Interconnection (PR Docket 84-414)

The Commission proposed relaxing geographical and other restrictions on the interconnection of private land mobile stations with the telephone network on frequencies below 800 MHz. The objective of this proposal is to enhance the utility of private land mobile radio systems in conducting business and local governmental operations.

Future Public Safety Telecommunications Requirements (PR Docket 84-232)

In response to a mandate by Public Law 98-214, the Commission commenced a proceeding to develop a plan to ensure that current and future spectrum requirements of state and local public safety authorities are accommodated in allocation of the spectrum. As an initial step, comments from public safety authorities and the public to identify their future projected spectrum requirements have been solicited.

Special Emergency Radio Service (PR Docket 81-416)

The Commission amended the Special Emergency Radio Service rules to decrease licensee burdens and promote more efficiency in the operation of emergency medical service (EMS) systems. This action removed the requirement that medical service licensees use transmitting equipment capable of operating on at least four channels. Instead, licensees, many of whom are local governments, can make equipment choices based on their particular needs and budgetary constraints.

Master Regulatory Review Program

The FCC eliminated 15 rules and revised or simplified 83 rules. In this process, 84 rule sections were reviewed. Thirteen distinct filing and notification requirements for licensees and applicants, all technical requirements on control stations operating on a secondary basis and the restrictions on mobile relay operation in the Land Transportation Radio Services in the 450-470 MHz band were eliminated.

Private Operational-Fixed Microwave Service

The Private Operational-Fixed Microwave Service (Part 94) provides for the use of frequencies above 952 MHz for point-to-point voice and nonvoice communications of persons eligible for Maritime, Aviation or Land Mobile Radio Services.

Microwave Private Carriers (PR Docket 83-426)

The Commission proposed permitting existing microwave licensees to sell their excess communications capacity as private carriers. The purpose of this proposal is to facilitate the availability of microwave communications systems to those eligibles, particularly small businesses, who might otherwise be precluded from using microwave radio because of the prohibitive costs of constructing separate systems. Additionally, a number of recordkeeping and reporting requirements would be removed from cooperatively shared systems.

13 GHz Microwave (PR Docket 84-27)

The agency proposed making the 13.2-13.25 GHz band available to the Private Operational-Fixed Microwave Service on an equal basis with broadcast and common carrier services. This proposal would relax Part 94 rules even further by exempting low-power portable transmitters from the requirement for type acceptance or notification.

Columbia Pictures (Docket 19671)

The Commission affirmed rules to permit private microwave system licensees in the operational-fixed service to use their systems to distribute products and services (e.g., data services and motion pictures) to their customers. Previously these licensees were restricted to using their microwave systems solely for internal communications purposes.

Compliance and Enforcement

Compliance with FCC rules and the Communications Act by private radio service licensees is promoted by imposition of various enforcement sanctions, including warning letters, monetary forfeitures, license revocation, consent decrees and suspension of operator permits. In the most extreme cases, criminal prosecution of licensees is recommended.

Violations are usually detected by engineers or technicians operating from one of the Commission's field offices or through investigations and inquiries made by private radio compliance attorneys.

Compliance efforts were concentrated on the Land Mobile Channel Recovery Program to recover spectrum and to eliminate "warehousing" and "paper loading" of 800 MHz Special Mobile Radio System (SMSS) channels. During FY 84, 555 channels were recovered and made available to applicants in metropolitan areas with waiting lists for channels. Three hundred and seventy-six

SMR systems were reviewed for compliance with loading and construction requirements, with cases initiated against 111. On Sept. 14, 1984, the U.S. Court of Appeals for the D.C. Circuit affirmed this channel recovery program. In 2 years of operation, over 1,200 trunked channels have been reclaimed and reallocated to waiting entrepreneurs.

During the fiscal year, the bureau initiated expedited paper hearing/ lottery proceedings to choose licensees from among competing SMR applicants in several areas across the nation. Lotteries have been held for Chicago, Cleveland, Houston, Dallas-Ft. Worth, Baltimore, New York, Philadelphia and Washington, D.C.

In an effort to promote an efficient and competitive environment in the Private Microwave Service, a compliance program for the Private Operational-Fixed Microwave Radio Service was developed in May 1984 to obtain a more accurate indication of frequency usage in heavily populated bands where spectrum is in short supply.

In the special services area, sanctions were initiated in 510 cases. There were 170 revocation proceedings, 250 Notices of Apparent Liability for Monetary Forfeiture and 90 other actions such as application dismissals, license cancellations, short-term grants and warning letters. One hundred and ninety applications were reviewed to determine whether they should be designated for hearing. Of the applications reviewed, 50 percent were in the maritime services, 35 percent were in the amateur services and 15 percent were in the aviation services.

The monetary forfeiture program for Special Radio Services was closely monitored for adherence to policy statements and effectiveness as administered by the Field Operations Bureau. On Dec. 30, 1983, a revised policy statement (providing new forfeiture amounts and adjusting the priority of citations according to the seriousness of the violation) was completed, delegating forfeiture authority to FOB for rule violations in the Maritime Radio Services. Summary reports on field-imposed forfeitures were reviewed on a regular basis.

Compliance attorneys participated in five docketed hearings during the fiscal year. The hearing in PR Docket 83-1065 resulted in revocation and suspension of an amateur's operator and station licenses and the denial of his pending application to upgrade his license. He had attempted to obtain a license by fraud. Three of the proceedings were favorably decided by summary decision. The avoidance of hearings through summary procedures along with case resolution through negotiations with the violators saved the public considerable expense and strengthened the effect of the Commission's enforcement efforts by deterring would-be violators.

General

The Office of Science and Technology (OST) provides scientific and technical support to the Commission through professional expertise, broad programs for monitoring scientific and technological developments and information analysis.

Because of continued U.S. participation in multilateral and bilateral forums to fashion new international agreements and technical standards, operating guides and administrative mechanisms necessary for international communications, and electronic sharing of radio channels, international communications is a major focus of OST. In 1984, OST monitored world-wide technological and institutional developments, prepared reports or initiated public proceedings, managed advisory committees, cooperated with other government agencies and attended important international meetings.

OST technical analysts followed domestic scientific and technological developments, undertook specialized projects, participated in FCC proceedings, gave FCC Commissioners and staff technical advice and participated in meetings to adopt voluntary standards. In addition, its laboratory tested special equipment to see if it met FCC standards.

Due to technological developments and user needs for radio, OST assessed spectrum management arrangements and took part in international and interagency meetings to adopt changes. In frequency management, it continued to provide voluminous administrative paperwork and administer international meetings for the United States.

International Activities

General

In 1984, dozens of international communications conferences were held, primarily under the auspices of the International Telecommunication Union (ITU). However, others were held among the International Civil Aviation Organization (ICAO), Intergovernmental Maritime Organization (IMO), United Nations Committee on the Peaceful Uses of Outer Space and Committee on Information (UNCOPUOS), UNESCO General Assembly, Intergovernmental Bureau for Informatics and Inter-American Telecommunications Conference (CITEL).

1985 Space Services Conference and Conference Preparatory Meeting

In 1985, the first session of the World Administrative Radio Conference (WARC) on the "Use of the Geostationary-Satellite Orbit and the Planning of the Space Services Using It" is expected to fashion new institutional arrangements for some satellite radiocommunication bands and services, which may have a significant impact on U.S. use. A first report on FCC proposals will be presented in early 1985.

High Frequency Broadcasting

In accordance with a resolution by the 1979 WARC, the first session of a two-part international conference on planning the high frequency bands allocated to the broadcasting service was held in Geneva from Jan. 10 to Feb. 11, 1984. The second session will be held in early 1987. In the interim, a recommendation made at the first session on that it consider detailed technical criteria and planning principles to be tested by the ITU's International Frequency Registration Board (IFRB) will be considered. FCC personnel are coordinating preparations for the second session with the National Telecommunications and Information Administration (NTIA), Voice of America (VOA) and the Board for International Broadcasting (BIB).

1986/1988 Regional Expanded Band AM Broadcasting Conference

In 1983, OST began preparations for this two-part conference which will plan the use of the 1605-1705 kHz band for AM broadcasting in the Western Hemisphere. The band was allocated by the 1979 WARC at the suggestion of the United States. The agenda for the first session, to be held in Geneva from Apr. 14 to May 2, 1986, will consider technical criteria and planning methods to be submitted to the second session. To further preparations for the conference, the Commission adopted an inquiry notice on May 10, 1984; a further notice is planned for FY 1985.

1987 Mobile WARC

A 6-week Mobile Services WARC will be held in Geneva in 1987. Although the agenda has not been specified, it is expected to include more detailed changes in the Radio Regulations for a Future Global Maritime Distress and Safety Service, as well as to introduce other changes affecting all the mobile services. To further develop U.S. preparations and proposals, the Commission issued an inquiry notice, has a second in progress and plans to establish a federal advisory committee. FCC representatives are working with the Department of State and NTIA to prepare for the Mobile WARC.

CCITT Meetings

The ITU's International Telegraph and Telephone Consultative Committee (CCITT) establishes the principals, strategies and standards for a global Integrated Services Digital Network (ISDN). OST personnel, in coordination with other FCC offices, worked on the first set of comprehensive ISDN recommendations and a long-term study program for adoption at the next plenary meeting.

CCIR Meetings

OST has continued to support CCIR activities, principally in spectrum utilization, propagation, mobile services, terrestrial sound, video and satellite services. Increasing in number and importance, CCIR specialized Interim Working Parties (IWPs) are guiding regional and international administrative radio conferences. For example, at its June 1984 interim meeting, CCIR Study Group 8 prepared the technical and operational bases for three administrative radio conferences. OST contributes to the IWPs in the mobile, aeronautical, broadcasting and satellite areas.

ITU Administrative Council

In April 1984 FCC staff and State Department personnel represented the United States at the ITU Administrative Council's annual meeting which revised the schedule for future conferences and prepared agendas for several upcoming administrative radio conferences to meet ITU needs, while staying within revised budgetary limits set by the 1982 Plenipotentiary Conference.

Technical Assistance

By administering fellowship grants funneled through the ITU by the U.N. Development Program, OST provides technical assistance to developing countries. Despite ITU funding difficulties in 1984, training programs for 18 Fellows were initiated. In cooperation with private industry, academic institutions and government agencies, telecommunications programs were prepared for these participants. OST continued this endeavor with the U.S. Telecommunications Institute, a joint government/private sector activity aimed at providing tuition-free training in telecommunications to foreign participants. In addition, OST coordinated programs within the FCC for 23 international visitors seeking information on how the agency regulates domestic telecommunications.

Allocations

General

Under the Communications Act, the Commission allocates frequencies for non-government radio services, while NTIA handles those for federal agencies. The Table of Frequency Allocations (Part 2 of the rules) lists those bands designated as non-government, government or shared. Periodically, the FCC modifies the table if it is in the national interest.

Radiodetermination Satellite Service (Gen. Docket 84-689)

In July 1984 the Commission proposed amending Part 2 to allocate spectrum for establishment of a radiodetermination satellite service using three geosynchronous satellites. It accepted for filing Geostar Corporation's applications to construct, launch and operate space stations in this service, and invited other applications for similar stations.

Radio Interference Protection Areas

In July 1984 the FCC amended Parts 2, 90 and 97, adding additional military locations as protected areas from radio interference in the 420-450 MHz band. This affects non-government radar and amateur operations in the band.

Coast Guard/Remote Pickup Sharing (Gen. Docket 83-425)

In February 1984 the Commission denied a proposed amendment of Parts 2 and 74 which would have allowed the U.S. Coast Guard to use 161.7 and 161.75 MHz, which falls within the 161.625-161.775 MHz band used by remote pickup broadcast stations.

Relief for L.A. County Sheriff's Communications Needs (Gen. Docket 84-902)

In September 1984 the Commission proposed a solution to allow the Los Angeles County Sheriff's Department to construct an improved communications system using a portion of the 470-515 MHz band (UHF TV Channels 14-20), traditionally prohibited to land mobile operations. Field tests are being made to determine the feasibility of an effective police communications system using UHF-TV Channel 19 spectrum with little or no interference to viewers of KSCI-TV, San Bernardino, on adjacent Channel 18.

Implementation of the 1979 WARC Final Acts (Gen. Docket 80-739)

In early 1980, in coordination with the Executive Branch, the Commission began writing the 1979 WARC Final Acts into the domestic rules. The Final Acts were ratified by the United States on Sept. 6, 1983, and the instrument of ratification was received by the ITU Oct. 27, 1983. The following December, the FCC amended Part 2 of the rules, including Section 2.106, Table of Frequency Allocations, to complete domestic adoption of the allocation issues of the Final Acts.

Tracking and Data Relay Satellite System

In August 1984, in coordination with the Executive Branch, the FCC amended Part 2 to give non-government space operations access to the Tracking and Data Relay System in the 2285-2290 MHz band. This gives non-government space systems a means for relaying data from space research, space operations and earth exploration-satellite systems to earth stations.

Removal of LORAN-A Operations from the 1900-2000 kHz Band

In March 1984 the Commission amended Part 2 by deleting Footnote NG15 from the Table of Frequency Allocations, thus removing restrictions which had been imposed on amateur use of the 1900-2000 kHz band to protect LORAN-A operations.

FCC/NTIA Joint Planning

Working together on spectrum planning to satisfy government and private requirements, the coordinated efforts of the FCC and NTIA during FY 1984 included: national implementation of the 1979 WARC Final Acts, allocation of spectrum in the 900 MHz band for shared government/non-government fixed use (Gen. Docket 82-243), and discussion of possible future uses of the 216-225 MHz band.

Frequency Coordination among Federal Agencies

The Interdepartment Radio Advisory Committee (IRAC) advises NTIA on frequency management concerning federally operated radio stations. The FCC participates on the IRAC and its standing subcommittees as a liaison representing non-government interests. FCC representatives serve on temporary IRAC committees appointed to fulfill special communications requirements and ensure implementation of new frequency assignments and allotment plans, such as those adopted by the ITU WARCs.

Frequency Assignments

The Commission is represented on IRAC's Frequency Assignment Subcommittee (FAS) which submits its recommendations on federal applications for frequencies to NTIA. In FY 1984, the FCC commented on approximately 50,000 such applications which could have posed technical problems for FCC licensees.

Non-Government Frequency List

A basic tool in domestic spectrum management is a master record of non-government frequency assignments. The records lists all stations authorized in FCC-administered radio services, providing data for occupancy studies of frequency bands being considered for reallocation to accommodate new services and expand existing services and for identifying interference sources.

The frequency records for non-government radio services, which include 1.7 million frequency assignments, are updated daily. The file is used by NTIA and the Commission for engineering frequency assignments. The master file search system, used to retrieve and analyze engineering data contained in the FCC's Honeywell computer, will be expanded to store additional data.

A master list and three auxiliary index lists derived from the computer are recorded on microfiche annually, primarily for use within the agency. The communications industry, user groups and the general public may inspect the lists at the FCC. The lists also may be obtained from the FCC's duplicating contractor. Although individual assignments to amateur, personal radio (other than general mobile), civil air patrol, aircraft and ship stations are not included in the lists, the frequency channels or bands available to these stations are identified.

Experimental Radio Service

The Experimental Radio Service lets the public experiment with new uses of radio frequencies. During FY 1984, 634 applications for radio research and developmental projects were granted. Federal contracts for developing radio equipment and investigating new radio techniques made up a considerable portion of the authorizations issued. At the close of the fiscal year, 1,575 experimental licenses had been issued.

Call Signs

FCC-assigned call signs identifying the station and service are key elements in the Commission's ability to maintain order among the many services and transmitters sharing the radio spectrum. Blocks of call signs have been assigned to the various non-government radio services, while a small number of discrete call signs have been assigned to Federal Government stations.

International Coordination

A limited portion of the spectrum, primarily in the high-frequency range, is useful for long-distance service, such as aeronautical and maritime mobile radiotelegraph. The demand for such circuits, coupled with the limited size of the bands available, results in crowding, often creating a potential for severe interference.

In some instances, these assignments are based on international frequency plans, but coordination among countries or with the ITU often is necessary. International coordination also is required in assigning frequencies for short-distance communications near international borders. Close coordination between the United States and Canada, which exchanged more than 916 letters and telegrams last year on frequency coordination, prevented excessive mutual interference in heavily populated border areas.

Satellites

A rapidly expanding responsibility is advance publication of information on satellite systems. This requirement, added to the ITU Radio Regulations by the 1971 Space WARC, is part of the coordination process. The FCC handles this function for U.S. space systems, including military, and the Intelsat system on behalf of all member-nations. During FY 1984, the Commission submitted advanced publications on 65 satellite networks, 238 requests for coordination with foreign systems and 72 requests for coordination of earth stations with foreign terrestrial radiocommunications systems, in addition to 129 requests per agreement in applying Radio Regulations Article 14.

Frequency Registration

ITU's International Frequency Registration Board (IFRB) examines new or modified frequency assignments to ensure they conform to international regulations and will not interfere with existing assignments. To validate its findings, the IFRB must obtain from ITU member-governments confirmation of the frequency assignments listed in its International Frequency List. Serving as a central clearinghouse for U.S. frequency assignments, the FCC submitted notification for all services during FY 1984, including 260 space notices for the space radiocommunications services and 1,199 notifications of quarterly schedules of international high-frequency broadcasting stations and more than 60,400 ship station notices.

Frequency Usage Data

As part of a 20-nation effort to compile updated frequency usage data for identifying interference sources and determining available frequency space, the FCC forwarded more than 6,600 monitoring observations to the ITU. Published in the Summary of Monitoring Information Received by the IFRB, the information provides a record of actual frequency use, including information on frequency stability, emissions in use and areas where transmissions are being monitored. This is a quick way to determine whether stations actually are using their frequencies at the time shown in the International Frequency List, especially during certain times of the year or periods of high or low sunspot activity.

Interference

In response to other federal agencies, the Commission interacts with foreign authorities in resolving interference involving technical problems. During the year, it resolved 60 out of 87 international interference cases, forwarding 10 reports to those agencies interfering with foreign stations and 1,350 reports on improper technical and operational practices to foreign countries.

Technical Analysis

A primary FCC function is to transform the radio frequency spectrum into a usable national resource for business, state and local government and personal use by balancing spectrum demands among competitors and promulgating "rules of the road" to maximize spectrum usefulness. Unlike most resource management, the spectrum can be expanded greatly by combining advanced radio technology with more carefully designed usage. The more successfully rules are adapted to new technological opportunities, the more successfully competing demands can be met, thus making the spectrum resource more productive. The basis for FCC technical actions are research and analysis, with outside technical information being collected, evaluated and disseminated along with correlative in-house research and analysis.

Propagation Analysis

An understanding of radiowave propagation phenomena is an essential part of the technical basis for rulemaking, in general, and for spectrum allocation, in particular. The FCC staff makes routine field studies to collect the propagation information needed to resolve specific issues. Several projects are being carried out to collect the long-term data needed to improve propagation predictions for particular frequency bands and particular sections of the country.

In southern California, a 2-year data collection program was completed recently. The data for the VHF/UHF band was needed to better model the extreme seasonal and daily variations in signal levels that occur because of super-refraction and ducting in the area. During FY 1984, mobile field strength data also was collected in Los Angeles and San Diego to supplement the long-term data, which still is being analyzed.

Preliminary planning field strength surveys were begun in FY 1984 for a 2-year project to collect VHF/UHF data in the Gulf Coast, where super-refraction and ducting could have a marked effect on expanded telecommunications services now being planned for the area. Medium-frequency skywave propagation greatly influences the AM broadcast service. Skywave propagation is dependent on the earth's ionosphere and varies with the time of day, season and 11-year sunspot cycle. These variations are dependent on the geomagnetic latitude of the propagation path. Based on mid-latitude paths, current FCC skywave models are inadequate for the more northern and southern latitudes.

Realistic propagation predictions for these paths are important in planning broadcast services for Alaska and negotiating frequency assignment agreements with Canada and South and Central American countries and resolving interference problems.

Two projects were started in FY 1981 to collect data for low-latitude (between the United States and South and Central America) and high-latitude (between Alaska and the lower states) paths. During FY 1984, data was collected at the Kingsville monitoring site and the University at Fairbanks. A report from the University of Alaska described the high-latitude measurement program and preliminary results. Selected portions of this data became the technical basis for assigning additional clear channels to Alaska (MM Docket 83-807) and for extending the operational hours of daytime-only stations (MM Docket 82-538).

Other Studies

Work continued on refining a new computerized allocation technique, termed a value-driven system, used in FY 1984 to produce a Table of Allotments for 689 new FM assignments as part of the proceedings in MM Docket 84-231. Refinements also continued on the "effective interference" computer program used to develop new rules regarding educational FM radio station interference to Channel 6 TV service (Docket 20735).

OST staff participated in domestic and international meetings to update CCIR technical and operational reports and recommendations to ensure that they reflected policies and trends in spectrum utilization and monitoring, space research and radio-astronomy, propagation in ionized and non-ionized media, mobile services and sound and video broadcasting.

RARC Support

An OST member was selected as the international chairman of CCIR IWP 6/4 responsible for developing skywave propagation data for the Region 2 RARC to deal with the 1605-1705 kHz allocation for AM broadcasting.

Experimental Engineering

Late model TV receivers were studied to determine performance when subject to potential interference in the 900 MHz land mobile band. In addition, co-channel and adjacent channel land mobile interference with UHF TV were evaluated. The study will be completed in 1985.

Broadcast Evaluations

A paper discussed the potential decrease in station separation using TV receiver data. Two AM stereo systems were examined for compatibility with existing monophonic AM receivers. The staff participated on industry sponsored committees on advanced TV systems and multi-channel sound.

Electromagnetic Compatibility

Because almost any electronic device can become a radio transmitter interfering with other electronic equipment, the FCC tries to prevent or limit such potential interference. In FY 1984, electromagnetic compatibility between TV reception and spread spectrum communications developed by the Defense Department was evaluated. Criteria for compatibility between land mobile FM radio systems and narrow-band land mobile technology was investigated. The U.S. Army's adaptive systems specialists were contacted for information on applying this technology to improved frequency re-use in the Land Mobile Service. Technical consultation on expanding the educational FM broadcast service without interfering with TV Channel 6 reception was provided. The bandwidths of several broadcast transmitters were monitored to determine their affect on aviation receivers at frequencies above the FM band.

Electromagnetic devices are tested for compatibility by manufacturers and the FCC on "open-field" test ranges. Since each range must give comparable results, the FCC and the American National Standards Institute's C 63 Committee studies how ranges can be evaluated for consistency. OST has developed a theoretical analytical model to be used as a standard to compare actual open-field test ranges. Last year, the accuracy of this model was compared against other site attenuation models.

Spread Spectrum Projects

Spread spectrum modulation is an emerging technology that, in certain instances, may permit spectrum re-use. The staff is evaluating comments in two rulemaking proceedings—Gen. Docket 81-414, Amateur Radio Service, and Gen. Docket 81-413, spread spectrum emissions in Parts 15 and 90—proposing the use of this new technology. A project to develop measurement procedures for evaluating spread spectrum transmitter power is continuing, as are efforts toward developing an efficient way to locate spread spectrum emissions causing interference.

Narrowband Technology

The FCC continues following Amplitude Compandored Single Sideband (ACSB) technology, initially funded by the Commission for testing by industry. ACSB may permit more transmitter use in the land mobile bands than FM technology. Narrowband FM, a technique reducing transmitter deviation, and, thus occupied bandwidth, also would permit the use of additional transmitters in these bands. Bandwidth measurements were made of a system in which the deviation was halved.

Engineering and Scientific Software

In FY 1984, the FCC began processing applications for Direct Broadcast Satellite (DBS) stations. A computer program, termed the Satellite Orbital

Utilization Program (SOUP) was modified to process these applications and to develop the regional plan for DBS service at the 1983 Region 2 Broadcasting Satellite Conference. In addition, another program permitted mapping of transmitter locations and AM-FM-TV station contours overlayed on geopolitical boundaries, as well as development of a VHF/UHF TV drop-in graphics model to show the effective and conventional interference areas gained or lost from a drop-in station.

Microwave Link Analysis System

The Commission continues to study the 1-40 GHz band to formulate a possible spectrum utilization policy for the fixed and mobile services. OST has supported this study by providing scientific computer programing and data base design expertise to enhance the system's retrieval and output capabilities.

Aeronautical Frequency Processing System

Generally, cable TV systems do not interfere with over-the-air radio since signal transmission is via a closed cable; but interference can occur if there is sufficient signal leakage due to poorly constructed or damaged coaxial cable. An interference checking program run on the Honeywell computer identifies, based on FCC rules, conflicts between cable TV operators who propose using aeronautical frequencies, frequencies reserved for the Federal Aviation Administration and Aeronautical Radio, Incorporated frequencies. The program uses the DM-IV data base management system for all information.

Satellite Systems

Communications

In FY 1984, a "Summary of the Technical and Planning Output of the RARC-83" was written for public distribution. Geostar's application for a satellite radio determination system using a geostationary orbit was evaluated technically (Gen. Docket 84-689). In addition, the Canadian M-SAT Mobile Satellite System and coordination procedures for 18 GHz fixed satellite systems were analyzed. A newly established Advisory Committee on Technical Standards for DBS submitted a final report to the Commission, which is studying it.

Space Services Conference

In preparation for the Space WARC-85, OST prepared the following reports used by the staff attending the Conference Preparatory Meeting held in the summer of 1984: "Efficient Use of Geostationary Satellite Orbit," which describes state-of-the-art and future trends of key technologies that impact on the efficient use of the orbit and spectrum resources; "Satellite Intersystem Interference," on the results of the reduced orbital spacing studies and which gives several ways of reducing interference by using new technologies, and "Increase in Communications Satellite Transponder Capacity through the Use of Solid State Power Amplifier."

Work also was begun on restructuring and expanding the FOOTPRINT Computer Program which draws satellite coverage contour maps of the world. The orbit utilization model developed by the WARC-85 Advisory Committee Meeting Working Group A-2 was implemented on the FCC computer, as was post-conference meeting work on the optimization of orbital resources.

Technology Planning

Technology planning provides the Chief Scientist with the information necessary to examine the relationship between the Commission and technological developments, for example, areas in which agency rules may discourage or impede technology and services. Together with other bureaus and offices, the Chief Scientist recommends appropriate changes.

FCC Responsibility Regarding RF Radiation Hazards

Increased attention is being given to potential health hazards from radio frequency (RF) radiation. As a result of an inquiry (Gen. Docket 79-144), the Commission proposed amending its rules implementing the National Environmental Policy Act to allow for evaluation of potential hazards from RF radiation emitted by FCC-authorized facilities and equipment.

Questions/Activities Related to Health Hazards of RF Radiation

OST advises the Commission and the public on matters relating to RF radiation health hazards. Because of numerous inquiries, an updated information bulletin—OST Bulletin 56—was issued to answer some of these questions. More than 3,000 copies have been distributed.

Additionally, OST provided analytic services to the public and FCC staff, and participated in measurement surveys, workshops and professional meetings relating to RF radiation effects and hazards. OST also represents the Commission on interagency panels dealing with these hazard and acts as liaison with other agencies having regulatory responsibilities in this area.

Tutorials

During the fiscal year, OST held tutorials on new technologies and their relationship to regulation including a complete overview of development and testing of an improved high performance television receiver, value-driven decision theory on spectrum allocations, and a telephone local loop/cable TV fiber optics field trial at Eli-St. Eustache, Maintoba, Canada.

Equipment Authorization

The FCC's equipment authorization program includes several specific procedures by which the agency approves radio equipment as a prerequisite to its importation, marketing or use.

Additionally, the program includes procedures for approving telephone equipment connected to the public telephone network and for advance approval of over-the-air subscription (pay) television systems prior to their authorization for use.

The specific authorization procedures include:

- Notification: A procedure established by the FCC in FY 1983 under which a grant of equipment authorization must be issued, but the applicant is not required to supply detailed measurement data or other technical information. (In FY 1984 the agency determined that this procedure should be applicable to FCC-licensed broadcast equipment such as radio and TV transmitters, and also microwave point-to-point services. Many types of communications receivers are also included.)
- Type Acceptance: Applicable to radio transmitting equipment utilized under a radio station license issued by the Commission and not covered under notification. Includes transmitters used in marine, aviation, radiolocation, land mobile, CB, omni-microwave, radar and other categories of equipment.
- Certification: Applicable principally to low power devices operated without a radio station license. Also includes communication receivers that tune between 30 and 840 MHz (excluding FM and TV), CB and super-regenerative receivers; low power communications devices such as walkie-talkies; garage door openers; remote control and security devices; computing devices; cordless telephones; TV interface and security and telemetry devices.
- Type Approval: Applicable to industrial, scientific and medical devices using radio frequency energy and having a high potential for creating interference, i.e., diathermy machines, epilators, microwave ovens and ultrasonic devices. Also included in the type approval program are certain kinds of marine radio equipment required for safety of life by statute or treaty.
- Registration: Applicable to certain categories of telephone equipment connected to the public telephone network.

- Advance approval of over-the-air subscription (pay) television systems: Approval of the encoding and decoding systems used by TV stations transmitting pay programing over the air is required under Part 73 of the FCC rules before operation will be authorized.
- Verification: A self-authorization procedure whereby the manufacturer is required to test the product, keep a record of the results, and for certain products, attach a compliance label. Applicable primarily to TV and FM receivers and Class A computing devices, as well as computing devices used in the home that are not personal computers or personal computer peripherals.

Of the procedures specified, only type approval mandates the testing of an equipment sample by the Commission prior to issuance of a grant. For the other procedures, action is based on review of applications and test reports submitted by the applicants, with the FCC retaining the option of making its own tests. Pre-grant testing of equipment is done in approximately 20 percent of authorization requests.

In FY 84, the pre-grant tests accounted for the majority of the 518 samples tested. In FY 85, with the relaxation of some FCC rules for equipment authorization, the emphasis will shift to post-grant testing to ensure continued compliance with regulations governing the use of the RF spectrum.

The Commission issued 6,958 new equipment authorization and authorized 1,188 changes in existing equipment during the fiscal year.

Equipment Sampling

As previously indicated, the type approval procedure mandates testing of equipment samples by the Commission prior to issuance of a grant. Sample testing of equipment subject to other types of authorizations is at the agency's option. Such testing may be done either before or after issuance of a grant.

As part of OST's reorganization which took place in September 1984, the Sampling and Measurements Branch was created in the Authorization and Standards Division to augment the current equipment sampling program.

The new branch will concentrate on testing of production units manufactured for sale to the public after the initial equipment authorization grant has been issued, rather than on engineering prototypes presented prior to grant.

The Commission expects to use the results of these tests for a number of purposes including evaluation of the verification and notification programs; enforcement actions in cases of noncompliance with FCC rules; confirmation of initial estimates of the interference potential of new devices; support for rulemaking actions; verification of test data provided by manufacturers in support of equipment authorization applications and to monitor the results of tests by independent laboratories.

Instrumentation Activities

The instrumentation activity (formerly the responsibility of the Instrumentation Branch, which was incorporated into the Sampling and Measurements Branch in the reorganization), includes maintenance and calibration of Laboratory and FOB radio field strength meters, signal generators and precision test equipment, and development of test data for use in other FCC programs.

Accomplishments for the fiscal year include:

- Acceptance testing of a new $50,000 microwave receiver for the Field Operations Bureau;
- Reconditioning and testing of four surplus surveillance receivers and three SSB transceivers for FOB.
- Calibration of antennas for a special FOB project.
- Construction and testing of a special test set to check automatic test equipment that operates on the IEEE 488 bus.
- Installation and testing of the new PLEXUS computer, and transfer of the automated equipment authorization programs and data base to the PLEXUS. Training in use of the new computer also was provided.
- Development of software to incorporate the new authorization procedure (notification) into the equipment authorization program.

- Implementation of software into the operating system of the laboratory computer to improve computer security.

Instruments Processed in the
Instrumentation Laboratory
(FY 1984)

	FOB	LAB	TOTAL
Field Intensity Meters	28	8	36
Standard Signal Generators	12	12	24
Miscellaneous	40	21	61

Technical Standards

To provide a sound basis for effective and efficient management of the radio spectrum, the FCC promulgates technical standards that affect the characteristics of signals radiated by transmitting and other devices regulated by it.

OST's Technical Standards Branch provides overall direction in the formulation of technical standards, and strives to obtain uniformity in implementing standards concepts. Technical standards are developed through a cooperative effort between the user public, the equipment supplier and the FCC.

As part of the reorganization of OST, the RF Devices Branch was incorporated into the Technical Standards Branch. The functions of this branch include recommending to the Commission standards and policies relating to RF devices that operate without an individual license under Parts 15 and 18 of the rules.

Part 15 authorizes operation of low power transmitters without a license and establishes minimum requirements for controlling the interference potential of computers, receivers and other electrical devices.

Part 18 establishes minimum interference suppression requirements for protecting radio communications from industrial, scientific and medical (ISM) equipment.

FY 1984 activities associated with the above functions include:

Multi-Channel TV Sound.

The FCC authorized multi-channel sound, bilingual monophonic, companding systems and stereo sound for television in a decision in Docket 21323. It permits various systems but provides protection for the pilot frequency of the Broadcast Television Study Committee system proposed by the Electronic Industries Association (EIA).

Equipment Authorizations

Public comment on expanding the types of equipment authorized under notification and verification were reviewed. In addition to reducing paperwork, grants of equipment authorizations could be made more rapidly, resulting in a savings to the applicant and the consumer.

On Jan. 26, 1984 (Gen. Docket 83-10) the FCC placed FM and TV receivers under verification and broadcast and fixed point-to-point microwave transmitters under notification. Other categories of equipment may be considered for placement under notification once the FCC gains some experience with using the notification process and once the test results gathered from the expanded equipment sampling program have been reviewed.

Committee and Coordination Group Activities

The International Maritime Organization (IMO) and the International Radio Consultative Committee (CCIR) continue to work toward development and implementation of a global maritime distress and safety system (FGMDSS). A transition plan is expected to commence in 1986 and full FGMDSS implementation about 1990. Along with use of satellites and digital selective calling, modern technology is expected to improve safety at sea significantly.

The work of the Federal Telecommunications Standards Committee, which forms the technical basis for all equipment purchased by the Federal Government, continued, and the U.S./Canada Radio Technical Liaison Committee continued its work on mutual technical matters.

OST represented the FCC on the Standards Board of the Institute of Electrical and Electronics Engineers (IEEE), the American National Standards Institute (ANSI), the International Radio Consultative Committee International Working Party (CCIR-IWP) 1/4 dealing with ISM equipment, the International Special Committee on Radio Interference (CISPR), and the National Committee of the International Electrotechnical Commission, all of which form a link between national and international, voluntary and regulatory standards activities.

Other Activities

Susceptibility of Home Electronic Equipment

The FCC participated on the American National Standards Institute Subcommittee on Susceptibility, which it helped establish, to determine which home electronic devices are the most susceptible to RF interference and to encourage the industry to consider susceptibility when designing such devices. Current participation consists of government, the EIA representing TV manufacturers, independent laboratories and the American Radio Relay League.

Cordless Telephones

The Commission adopted interim rules in Part 15 which would allow cordless telephones to use frequencies in the 46.6 to 47.0 MHz and 50.0 MHz bands, thus expanding the number of channels from 5 to 10. The rules require the cessation of production and importation in 5 years, with marketing to cease 1 year later. Meanwhile the agency will consider permanent rule provisions.

Computer Devices

Part 15 regulations limit radio noise emissions from computing equipment to control their potential for interfering with radio communications. The Commission proposed exempting large specialized computing equipment built in small quantities from achieving compliance with specific technical standards. The exemption, if adopted, would be of particular benefit to small manufacturers. International recommendations for controlling interference from computers and similar equipment is being voted on by members of the CISPR.

RF Lighting Sources

New, more energy efficient electric lights are being developed which use RF energy to ionize a gas inside the bulb. The rules for these devices, classified as miscellaneous ISM equipment subject to Part 18, were intended to limit interference generated by their use in industry and were not intended to apply to use in homes and businesses. To permit introduction of this new technology, the Chief Scientist, under authority delegated by the Commission, waived Part 18 administrative requirements for several manufacturers subject to prescribed conditions for monitoring and controlling interference. The possibility of special rule provisions for these devices is under consideration.

Perimeter Protection Systems

New provisions were adopted in Part 15 for perimeter protection systems. Such systems are used for security purposes and employ an electric cable, buried around the perimeter of the zone to be protected, which transmits a low level radio signal to detect intruders. Expanded provisions for such systems are anticipated.

Medical Ultrasonic Equipment

The FCC affirmed that Part 18 regulations governing emissions from industrial, scientific and medical equipment apply to medical ultrasonic diagnostic equipment. Studies in progress may result in further action next year.

TV Monitors

The Commission ruled that two-channel TV monitors are not considered television receivers for the purposes of the all channel TV reception requirements. Such monitors are intended for display of signals from home computers, video games and cable TV systems.

Remote Control and Security Devices

The Door Operator and Remote Control Manufacturers Association and the Alarm Device Manufacturing Company were granted waivers of certain technical requirements governing low power remote control and security devices to allow them to continue to be marketed while the FCC considered petitions for rule amendments.

Implementation of the 1979 WARC Final Acts (Gen. Docket 80-739)

In early 1980, in coordination with the Executive Branch, the Commission began writing the Final Acts of the 1979 World Administrative Radio Conference into the domestic rules which ultimately resulted in a new National Table of Frequency Allocations. In September 1984 the FCC addressed the issue of new emission designators used in the ITU Radio Regulations.

Commissioners

From 1934 to the Present

Commissioner	Party Affiliation	State	Term of Service
*Eugene O. Sykes	Democrat	Mississippi	July 11, 1934 to Apr. 5, 1939
Chairman			July 11, 1934 to Mar. 8, 1935
*Thad H. Brown	Republican	Ohio	July 11, 1934 to June 30, 1940
*Paul A. Walker	Democrat	Oklahoma	July 11, 1934 to June 30, 1953
Acting chairman			Nov. 3, 1947 to Dec. 28, 1947
Chairman			Feb. 28, 1952 to Apr. 17, 1953
*Norman Case	Republican	Rhode Island	July 11, 1934 to June 30, 1945
Irvin Stewart	Democrat	Texas	July 11, 1934 to June 30, 1937
*George Henry Payne	Republican	New York	July 11, 1934 to June 30, 1943
*Hampson Gary	Democrat	Texas	July 11, 1934 to Jan. 1, 1935
*Anning S. Prall	Democrat	New York	Jan. 17, 1935 to July 23, 1937
Chairman			Mar. 9, 1935 to July 23, 1937
*T.A.M. Craven	Democrat	District of Columbia/	Aug. 25, 1937 to June 30, 1944
		Virginia	July 2, 1956 to Mar. 25, 1963
*Frank McNinch	Democrat	North Carolina	Oct. 1, 1937 to Aug. 31, 1939
Chairman			Oct. 1, 1937 to Aug. 31, 1939
*Frederick I. Thompson	Democrat	Alabama	Apr. 13, 1939 to June 30, 1941
*James Lawrence Fly	Democrat	Texas	Sept. 1, 1939 to Nov. 13, 1944
Chairman			Sept. 1, 1939 to Nov. 13, 1944
Ray C. Wakefield	Republican	California	Mar. 22, 1941 to June 30, 1947
*Clifford J. Durr	Democrat	Alabama	Nov. 1, 1941 to June 30, 1948
*Ewell K. Jett	Independent	Maryland	Feb. 15, 1944 to Dec. 31, 1947
Interim chairman			Nov. 16, 1944 to Dec. 20, 1944
*Paul A. Porter	Democrat	Kentucky	Dec. 21, 1944 to Feb. 25, 1946
Chairman			Dec. 21, 1944 to Feb. 25, 1946
Charles R. Denny	Democrat	District of Columbia	Mar. 30, 1945 to Oct. 31, 1947
Acting chairman			Feb. 26, 1946 to Dec. 3, 1946
Chairman			Dec. 4, 1946 to Oct. 31, 1947
*William H. Willis	Republican	Vermont	July 23, 1945 to Mar. 6, 1946
Rosel H. Hyde	Republican	Idaho	Apr. 17, 1946 to Oct. 31, 1969
Chairman			Apr. 18, 1953 to Apr. 18, 1954
Acting chairman			Apr. 19, 1954 to Oct. 3, 1954
Acting chairman			May 1, 1966 to June 26, 1966
Chairman			June 27, 1966 to Oct. 31, 1969
*Edward M. Webster	Independent	District of Columbia	Apr. 10, 1947 to June 30, 1956
*Robert F. Jones	Republican	Ohio	Sept. 5, 1947 to Sept. 19, 1952
*Wayne Coy	Democrat	Indiana	Dec. 29, 1947 to Feb. 21, 1952
Chairman			Dec. 29, 1947 to Feb. 21, 1952
George E. Sterling	Republican	Maine	Jan. 2, 1948 to Sept. 30, 1954
*Frieda B. Hennock	Democrat	New York	July 6, 1948 to June 30, 1955
Robert T. Bartley	Democrat	Texas	Mar. 6, 1952 to June 30, 1972
*Eugene H. Merrill	Democrat	Utah	Oct. 6, 1952 to Apr. 15, 1953
John C. Doerfer	Republican	Wisconsin	Apr. 15, 1953 to Mar. 10, 1960
Chairman			July 1, 1957 to Mar. 10, 1960

See footnote at end of table

Commissioners (Continued)

Commissioner	Party Affiliation	State	Term of Service
Robert E. Lee	Republican	Illinois	Oct. 6, 1953 to June 30, 1981
Interim chairman			Feb. 5, 1981 to Apr. 12, 1981
Chairman			Apr. 13, 1981 to May 18, 1981
*George C. McConnaughey	Republican	Ohio	Oct. 4, 1954 to June 30, 1957
Chairman			Oct. 4, 1954 to June 30, 1957
*Richard A. Mack	Democrat	Florida	July 7, 1955 to Mar. 3, 1958
Frederick W. Ford	Republican	West Virginia	Aug. 29, 1957 to Dec. 31, 1964
Chairman			Mar. 15, 1960 to Mar. 1, 1961
*John S. Cross	Democrat	Arkansas	May 23, 1958 to Sept. 30, 1962
Charles H. King	Republican	Michigan	July 19, 1960 to Mar. 2, 1961
Newton N. Minow	Democrat	Illinois	Mar. 2, 1961 to June 1, 1963
Chairman			Mar. 2, 1961 to June 1, 1963
E. William Henry	Democrat	Tennessee	Oct. 2, 1962 to May 1, 1966
Chairman			June 2, 1963 to May 1, 1966
Kenneth A. Cox	Democrat	Washington	Mar. 26, 1963 to Aug. 31, 1970
Lee Loevinger	Democrat	Minnesota	June 11, 1963 to June 30, 1968
*James J. Wadsworth	Republican	New York	May 5, 1965 to Oct. 31, 1969
Nicholas Johnson	Democrat	Iowa	July 1, 1966 to Dec. 5, 1973
H. Rex Lee	Democrat	District of Columbia	Oct. 28, 1968 to Dec. 31, 1973
Dean Burch	Republican	Arizona	Oct. 31, 1969 to Mar. 8, 1974
Chairman			Oct. 31, 1969 to Mar. 8, 1974
Robert Wells	Republican	Kansas	Nov. 6, 1969 to Nov. 1, 1971
Thomas J. Houser	Republican	Illinois	Jan. 6, 1971 to Oct. 5, 1971
Charlotte T. Reid	Republican	Illinois	Oct. 8, 1971 to July 1, 1976
Richard E. Wiley	Republican	Illinois	Jan. 5, 1972 to Oct. 13, 1977
Chairman			Mar. 8, 1974 to Oct. 13, 1977
Benjamin L. Hooks	Democrat	Tennessee	July 5, 1972 to July 25, 1977
James H. Quello	Democrat	Michigan	April 30, 1974—
Glen O. Robinson	Democrat	Minnesota	July 10, 1974 to Aug. 30, 1976
Abbott M. Washburn	Republican	Minnesota	July 10, 1974 to Oct. 1, 1982
Joseph R. Fogarty	Democrat	Rhode Island	Sept. 17, 1976 to June 30, 1983
Margita E. White	Republican	Sweden	Sept. 23, 1976 to Feb. 28, 1979
Charles D. Ferris	Democrat	Massachusetts	Oct. 17, 1977 to Apr. 10, 1981
Chairman			Oct. 17, 1977 to Feb. 4, 1981
Tyrone Brown	Democrat	Virginia	Nov. 15, 1977 to Jan. 31, 1981
Anne P. Jones	Republican	Massachusetts	Apr. 7, 1979 to May 31, 1983
Mark S. Fowler	Republican	Canada	May 18, 1981—
Chairman			May 18, 1981—
Mimi Weyforth Dawson	Republican	Missouri	July 6, 1981—
Henry M. Rivera	Democrat	New Mexico	Aug. 10, 1981—
Stephen A. Sharp	Republican	Ohio	Oct. 4, 1982 to June 30, 1983
Dennis R. Patrick	Republican	California	Dec. 2, 1983—

* Deceased

Mass Media Statistics

Current Broadcast Authorizations

Outstanding broadcast authorizations for major services at the close of Fiscal Year 1984 totaled 19,213 an increase of 947 over fiscal 1983.

Class	Sept. 30, 1983	Sept. 30, 1984	Increase or (decrease)
Standard (AM)	4,892	4,936	44
Frequency modulation (FM)	3,915	4,090	175
Educational FM	1,285	1,348	63
UHF commercial TV	534	603	69
VHF commercial TV	555	558	3
UHF educational TV	194	203	9
VHF educational TV	112	119	7
TV Translator (UHF-VHF)	5,615	5,921	306
FM translator and booster	1,164	1,435	271
Totals	18,266	19,213	947

There were 11,857 AM, FM and TV broadcast stations authorized at the close of fiscal 1984. A total of 10,757 had operating authorizations, and 1,100 were not on the air.

	Operating authorizations Sept. 30, 1983	Not on the air Sept. 30, 1983	Operating authorizations Sept. 30, 1984	Not on the air Sept. 30, 1984
Standard (AM)	4,726	166	4,754	182
Frequency modulation (FM)	3,490	425	3,658	432
Educational FM	1,104	181	1,165	183
UHF commercial TV	334	200	358	245
VHF commercial TV	536	19	535	23
UHF educational TV	172	22	173	30
VHF educational TV	107	5	114	5
Totals	10,469	1,018	10,757	1,100

Broadcast Assignment and Transfer Applications

Class	Received	Granted	Dismissed or denied
Standard (AM)	1,097	1,000	44
Commercial FM	873	797	31
Educational FM	18	17	1
Commercial TV	303	271	5
Educational TV	6	5	0
Totals	2,379	2,090	81

Broadcasting Since 1954

The following table lists the number of authorized, licensed and operating broadcast stations and stations deleted in 10-year intervals beginning in 1954. Due to reorganization of recordkeeping practices, figures on pending applications in various categories have been discontinued since 1970. Additionally, "on-the-air" figures are no longer available due to the elimination of the requirement that separate applications for program test authority be filed in most cases. (For yearly lists from 1949-1983 see previous editions of FCC Annual Reports.)

Year	Grants	Deletions	Pending Applications	Licensed	CPs on air	Total on air	Not on air	Total authorized
Commercial TV								
1954	174	81	200	104	298	402	171	573
1964	15	10	136	526	56	582	86	668
1974	3	9	—	695	11	706	53	759
1984	115	0	—	893	—	—	268	1 161
Educational TV								
1954	13	0	17	0	6	6	24	30
1964	13	0	30	72	7	79	28	107
1974	8	0	—	222	15	234	12	246
1984	21	1	—	287	—	—	35	322
Commercial AM								
1954	148	29	226	2 565	18	2 583	114	2 697
1964	80	16	235	3 912	64	3 976	85	4 061
1974	21	8	—	4 388	21	4 409	58	4 467
1984	66	1	—	4 754	—	—	182	4 936
Commercial FM								
1954	27	54	5	529	24	553	16	569
1964	183	18	258	1 141	40	1 181	190	1 371
1974	136	5	—	2 503	44	2 547	166	2 713
1984	196	0	—	3 658	—	—	432	4 090
Educational FM								
1954	9	5	1	112	0	112	8	120
1964	8	1	11	231	12	243	14	257
1974	44	5	—	661	23	684	80	764
1984	61	1	—	1 155	—	—	193	1 348

Nonhearing Applications Statistics (Cable Television and Broadcast)

Applications	On hand Oct. 1, 1983	Incoming workload			Disposed			On hand, Sept 30, 1984
		New	Returned to processing					
			Hearing	Nonhearing	Granted	Dismissed denied, returned	Designated for hearing	
Standard Broadcast (AM)								
New stations and major changes	488	305	2	2	180	91	121	418
Assignments and transfers	135	1,096	0	1	1,000	44	0	190
Renewals	713	681	0	13	1,102	0	3	305
Licenses and other	392	1,173	0	0	942	53	0	548
Total applications	1,728	3,255	2	16	3,224	188	124	1,461[1]
Frequency Modulation (FM) (Commercial and Educational)								
New stations and major changes	1,090	1,226	0	3	302	413	491	1,077
Assignments and transfers	101	887	0	4	814	32	0	145
Renewals	642	784	0	14	1,168	2	5	269
Licenses and other	1,131	1,774	0	7	1,873	136	4	851
Total applications	2,964	4,671	0	28	4,157	583	500	2,342[1]
FM Translators and Boosters								
New stations and major changes	286	1,327	0	0	364	671	—	560
Assignments and transfers	5	36	0	0	29	1	—	10
Renewals	87	182	0	0	199	0	—	75
Licenses and other	119	364	0	0	382	18	—	44
Total applications	497	1,909	0	0	974	690	—	689[1]
Television (TV) (Commercial and Educational)								
New stations and major changes	193	325	122	0	100	129	236	175
Assignments and transfers	32	391	0	0	381	5	0	37[2]
Renewals	157	189	0	0	286	0	3	57
Licenses and other	55	538	2	4	464	28	0	107
Total applications	437	1,443	124	4	1,231	162	239	376[1]

Nonhearing Applications Statistics—Continued

Applications	On hand Oct. 1, 1983	Incoming workload			Disposed			On hand, Sept. 30, 1984
		New	Returned to processing		Granted	Dismissed denied, returned	Designated for hearing	
			Hearing	Nonhearing				
LPTV/TV Translators								
New stations and major changes	10,153	27,818	—	—	290	13,150	—	24,531
Assignments and transfers	19	58	--	—	70	0	—	7
Renewals	48	366	—	—	366	0	—	48
Licenses and other	41	476	—	—	469	37	—	11
Total applications	10,261	28,718	—	—	1,195	13,187	—	24,597
Instructional TV Fixed								
New stations and major changes	175	746	—	—	229	23	—	669
Assignments and transfers	0	16	—	—	13	0	—	3
Renewals	1	33	—	—	33	0	—	1
Licenses and other	6	196	—	—	192	8	—	2
Total applications	182	991	—	—	467	[2]31	—	675[1]
Auxiliary Services								
Major actions	1,013	2,492	0	0	2,199	86	—	1,139[1]
CARS								
New stations and major changes	101	529	—	—	539	27	—	64
Assignments and transfers	4	318	—	—	272	2	—	48
Renewals	1	86	—	—	74	1	—	12
Licenses and other	13	540	—	—	528	2	—	23
Total CARS	119	1,473	—	—	1,413	32	—	147[1]
Cable TV								
Special relief—CAC	22	0	0	—	0	11	—	11
Special relief—CSR	369	303	38	—	89	295	—	326
Show cause petitions	34	33	3	—	0	34	—	36
Total Cable TV	475	336	41	—	89	340	—	373
Total Cable TV/CARS Services	544	1,809	41	—	1,502	372	—	520

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[1] The year-end pending count for all services for FY 1984 have been adjusted to reflect the results of an actual inventory of pending cases done in FY 1984.

[2] Includes approximately 90 TV Translator applications associated with the assignment and transfer of primary TV stations.

Broadcast Licenses Denied

The following is an informal list of applications for license or license renewals denied or dismissed by the Commission from 1934 to the present:

Call letters	Location	Date of denial/ dismissal	Date of station deletion
KGIX	Las Vegas, Nev	7-31-34	5-14-35
KPJM	Prescott, Ariz	10-15-35	12-16-35
KGBZ	York, Neb	5-21-36	7-28-36
KWEA	Shreveport, La	7-2[illegible]	8-1-36
KWTN	Watertown, S.D	5-25-38	11-6-39
KGDY	Huron, S.D	5-25-38	6-24-38
WHEF	Kosciusko, Miss	10-25-38	11-14-38
KGCA	Decorah, Iowa	11-4-40	11-24-40
KIDW	Lamar, Colo	9-22-42	9-22-42
WOKO	Alabany, N.Y	3-27-45	11-9-47
WORL	Boston, Mass	4-23-47	5-31-49
WJBW	New Orleans, La	4-22-48	8-14-49
WIBK	Knoxville, Tenn	8-10-49	11-17-52
KWRZ	Flagstaff, Ariz	8-18-49	6-22-50
KXXI	Reno, Nev	12-27-49	2-28-50
KSFE	Needles, Calif	8-4-50	8-4-50
KENE	Belen, N.M	1-10-51	1-31-51
KLIO	Portland, Ore	4-24-57	5-27-57
WREA	East Palatka, Fla	7-19-61	2-12-62
WITV(TV)	Fort Lauderdale, Fla	7-27-61	9-18-61
KCKY	Coolidge, Ariz	2-23-62	12-10-62
KCLF	Clifton, Ariz	2-23-62	12-10-62
KGLU	Safford, Ariz	2-23-62	12-10-62
KVNC	Winslow, Ariz	2-23-62	12-10-62
KZOW, KWJB-FM	Globe, Ariz	2-23-62	12-10-62
KRLA	Pasadena, Calif	3-15-62	8-1-64[1]
WDKD	Kingstree, S.C	7-25-62	2-1-65
WSFN	Saratoga Springs, N.Y	8-9-63	3-3-64
WIKI	Irondale, Ala	9-11-63	10-30-64
WMOZ	Mobile, Ala	1-29-64	8-3-66
WIZ	Lorain, Ohio	3-31-64	7-14-67
WGMA	Hollywood, Fla	4-17-64	[2]
WHZN	Hazleton, Pa	3-18-65	4-6-65
WLEV-TV	Bethlehem, Pa	6-16-65	8-25-65
WBPZ-TV	Lock Haven, Pa	6-16-65	8-25-65
KSHO-TV	Las Vegas, Nev	7-23-65	6-9-67
KMFE	Anderson, Calif	6-2-65	9-15-65
KABE	Westwego, La	10-6-65	6-6-66
WKSB	Milford, Del	4-29-66	6-20-66
KSFV-FM	San Fernando, Calif	1-30-68	3-28-68
WNJR	Newark, N.J	11-26-68	5-31-84[9]
WKOV	Wellston, Ohio	1-24-68	9-11-70
KICM	Golden, Colo	10-2-68	4-8-69[3]
WHDH-TV	Boston, Mass	1-22-69	3-19-72
KXXI(FM)	Alamorgordo, N.M	5-6-69	8-27-69[3]
WCGA	Calhoun, Ga	10-29-69	12-17-71
WTRG	Honolulu, Hawaii	3-18-70	2-18-71[3]
KFLY, KFLY-FM	Corvallis, Ore	5-20-70	3-3-71
KPTN	Central Point, Ore	5-20-70	3-3-71
WXUR, WXUR-FM	Media, Pa	7-1-70	7-6-73[3]
KJML-FM	Sacramento, Calif	7-27-70	9-14-70[1]
KVIN	Vinita, Okla	6-21-71	4-20-72
KWLG	Wagoner, Okla	6-21-71	8-25-72
WCFV	Clifton Forge, Va	5-27-71	7-1-71
KRSD-TV	Rapid City, S.D	10-28-71	6-20-73[3]
KDSJ-TV	Lead, S.D	10-28-71	6-20-73[3]
WEBY	Milton, Fla	5-10-72	4-18-73
KDOV	Medford, Ore	5-10-72	6-29-72
WLUX	Baton Rouge, La	9-20-72	[2]
WPRY	Perry, Fla	5-23-73	7-6-73
WHMC	Gaithersburg, Md	3-10-71	12-3-73
WMRE	Monroe, Ga	11-28-73	9-5-74
WSRA	Milton, Fla	1-10-74	2-28-74
KANI	Montgomery, Ala	12-19-73	9-1-75
WAIQ(TV-ED)	Montgomery, Ala	12-17-74	[6]
WBIQ(TV-ED)	Birmingham, Ala	12-17-74	[6]
WCIQ-TV-ED)	Mount Cheaha State Park, Ala	12-17-74	7-15-76
WDIQ(TV-ED)	Dozier, Ala	12-17-74	7-15-76
WEIQ(TV-ED)	Mobile, Ala	12-17-74	7-15-76
WFIQ(TV-ED)	Florence, Ala	12-17-74	7-15-76
WGIQ(TV-ED)	Louisville, Ala	12-17-74	7-15-76
WHIQ(TV-ED)	Huntsville, Ala	12-17-74	7-15-76
KEFM(FM)	Omaha, Neb	1-30-75	9-2-76[4]
KOIL	Omaha, Neb	1-30-75	3-22-83[9]
KISN	Vancouver, Wash	1-30-75	9-2-76
WIFE	Indianapolis, Ind	1-30-75	6-1-76
WIFE-FM	Indianapolis, Ind	1-30-75	9-2-76
WLBB	Carrollton, Ga	4-30-75	8-19-81
WOOK	Washington, D.C	9-9-75	4-22-78
WFAB	Miami, Fla	9-17-75	2-21-77
WOTW, WOTW-FM	Nashua, N.H	2-19-76	7-30-78
WHBI-FM	Newark, N.J	5-19-76	[7]
WMOU, WXLQ(FM)	Berlin, N.H	6-29-76	3-6-80
KORK-TV	Las Vegas, Nev	6-30-76	10-1-79
WKYZ	Madisonville, Tenn	8-25-76	1-10-77
KFDR	Grand Coulee, Wash	1-17-77	3-14-77
WXPN-FM(ED)	Philadelphia, Pa	3-22-77	[5]
WSWG, WSWG-FM	Greenwood, Miss	7-13-77	12-14-81
WWLE	Cornwall, N.Y	10-7-77[3]	2-13-81
WLIR(FM)	Garden City, N.Y	11-18-77	6-21-83
WJLW(FM)	Miami, Fla	1-5-78	4-29-81
WHLW	Lakewood, N.J	2-17-78	[2]
WJJZ	Mt. Holly, N.J	4-4-78	11-24-82
WBRL	Berlin, N.H	5-4-78	11-10-80
KOAD	Lemoore, Calif	7-12-78	10-16-78
KIKX	Tucson, Ariz	5-29-80	5-28-82
WNAC-TV	Boston, Mass	6-4-80	5-26-82
KHJ-TV	Los Angeles, Calif	6-4-80	[4]
WOR-TV	New York, N.Y	6-4-80	[8]
KDIG-FM	San Diego, Calif	7-24-80	[7]
WDRK	Greenville, Ohio	5-14-81	8-3-83
KHOF-TV	San Bernardino, Calif	11-14-80	5-24-83
WVCA-FM	Gloucester, Mass	6-15-82	[4]
KVOF-TV	San Francisco, Calif	2-7-84	[4]
KHOF-FM	Los Angeles, Calif	11-13-83	[4]

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[1] Operating on temporary authority

[2] Later allowed to assign license

[3] License surrendered on date listed

[4] No final action

[5] New authorization granted 10-10-79

[6] Reinstated as CP 2-14-80

[7] New interim operation

[8] Station moved to Secaucus, N.J., not deleted

[9] New license issued

AVAILABLE

License and Permit Revocations

The following are licenses and construction permits revoked by the Commission.

Call letters	Location	Date of revocation order	Date of station deletion
KUMA	Yuma, Ariz.	2-20-39	2-1-40
WSAL	Salisbury, Md.	10-24-39	3-31-40
WWPN	Middlesboro, Ky.	10-16-47[1]	2-27-48
KGAR, KGAR-FM	Garden City, Kans.	2-27-48	5-15-49
WPBP	Mayaguez, P.R.	12-22-48	5-2-49
KCRO	Englewood, Colo.	10-14-49	8-9-50
KWIK	Burbank, Calif.	12-14-49	5-15-51
KPAB	Laredo, Tex.	1-26-50	2-14-51
WXLT	Ely, Minn.	5-23-50	3-28-51
KFMA	Davenport, Iowa	6-21-50[1]	4-2-51
KALA	Sitka, Alaska	5-21-52	8-6-52
WSHA(TV)	Sharon, Pa.	10-27-54[1]	3-31-55
KOTO	Albuquerque, N.M.	6-22-55[1]	11-9-55
WGAV	Amsterdam, N.Y.	9-25-57[1]	4-28-59
KHCD	Clifton, Ariz.	7-23-58	1-27-59
KAJK(TV)	Reno, Nev.	6-3-59[1]	7-7-59
KBOM	Bismarck-Mandan, N.D.	11-30-60	3-3-63
KLFT	Golden Meadow, La.	1-19-61	6-25-62
WIOS	Tawas City-East Tawas, Mich.	12-20-61	1-13-62
KPSR(FM)	Palm Springs, Calif.	7-19-61	8-16-62
WLOV(FM)	Cranston, R.I.	11-1-61	1-30-63
KCPA(FM)	Dallas, Tex.	2-12-62	6-27-62
WGRC	Green Cove Springs, Fla.	2-20-62	6-27-62
KWK	St. Louis, Mo.	5-27-63	3-1-66
WBMT	Black Mountain, N.C.	6-26-63	9-1-63
WELF-FM	Glen Ellyn, Ill.	3-11-64	3-11-64
WELG-FM	Elgin, Ill.	3-11-64	3-11-64
WCLM(FM)	Chicago, Ill.	9-27-64	8-28-66
WHHL	Holly Hill, S.C.	6-22-66	7-12-67
WPFA	Pensacola, Fla.	5-11-66	[2]
WSRA	Milton, Fla.	8-1-67	8-17-67
WEKY	Richmond, Ky.	5-3-68	[2]
KDFP(FM)	Tulare, Calif.	7-3-68	12-3-68[3]
KLSU	White Castle, La.	3-26-73	6-5-73
WFAN-TV	Washington, D.C.	4-16-74	10-22-75
WMET(TV)	Baltimore, Md.	4-16-74	10-22-75
WVGB	Beaufort, S.C.	6-24-76	6-1-81[4]
WCLY	Columbia, Pa.	5-19-77	9-14-78
WLLE	Raleigh, N.C.	7-21-77	1-21-80

[1] Construction permit only.

[2] Later allowed to assign license.

[3] License surrendered.

[4] New interim operation commenced.

Private Radio Statistics

Authorized Stations

Class of Station	Total Number of Stations	Total Transmitters	Authorization Requests
Aircraft	208,047		40,179
Aeronautical & Fixed	10,411		2,980
Aviation Auxiliary Group	1,769		393
Aviation Radionavigation Land	2,385		677
Civil Air Patrol	22,696		1,424
Total Aviation Services	245,308	N/A	45,653
Ship	483,114		134,315
Coastal Group	11,358		3,641
Marine Auxiliary Group	99		34
Marine Radar Land	175		20
Alaskan Group	2,705		325
Total Marine Services	497,451	N/A	138,335
Police	41,114	709,967	11,623
Fire	34,868	385,785	9,160
Local Government	52,029	694,109	14,833
Highway Maintenance	11,907	160,343	3,362
Forest Conservation	8,850	83,467	2,529
Special Emergency	35,464	259,408	10,294
Total Public Safety Services	184,232	2,293,079	51,801
Special Industrial	110,195	775,479	29,017
Business	561,610	3,084,148	165,449
Power	31,367	300,231	9,845
Petroleum	23,544	197,695	7,381
Manufacturers	16,822	165,672	5,101
Forest Products	9,089	75,869	2,458
Industrial Radiolocation	8,333	63,359	2,844
Motion Pictures	328	5,028	173
Relay Press	1,084	15,705	377
Telephone Maintenance	5,553	81,192	2,259
Total Industrial Services	767,925	4,764,378	224,904
Railroad	12,432	192,630	5,049
Taxicab	6,053	110,089	1,514
Automobile Emergency	7,745	45,372	1,822
Interurban Passenger	444	9,020	187
Interurban Property	4,059	53,103	1,145
Urban Passenger	563	23,051	168
Urban Property	4,459	65,779	1,182
Total Land Transportation Services	35,755	499,044	11,067
470 - 512 MHz	18,872	141,325	7,083
800 MHz	76,347	486,989	56,909
900 MHz	769	14,065	539
Total 470 - 512 MHz, 800 MHz & 900 MHz	95,988	642,379	64,531
Total Private Land Mobile Services	1,083,900*	8,198,880	352,303
Total General Mobile	32,986*	384,407	6,814
Amateur	412,716		125,489
RACES	442		63
Disaster	1		0
Total Amateur & Disaster Services	413,159	N/A	125,552
Total Operational Fixed Services	20,491	N/A	11,692
Total Private Radio Services	2,293,295*	8,583,287**	680,349***

*The method used to derive total number of stations was changed from a manual system to an automated system at the end of Fiscal Year 1984. This procedural change has resulted in significant increases in several areas but provides a more accurate station count.

**Total transmitters are only available in the Private Land Mobile and General Mobile services.

***Restricted Permits for Fiscal Year 1984 not included in total were 239,864

Enforcement Sanctions

(Notice of apparent liability and citiation issuance from Oct. 1, 1983 - Sept. 30, 1984)

FOB Authority	NALs Issued	Value of NALs issued	Payments Received	Value of Payments Received
Section 301	176	$169,200	183	$41,274
Part 13	24	12,625	22	4,625
FOB on behalf of another bureau (in accordance with currently issued Statement of Policy)				
Office of Science & Technology (Parts 2, 5, 15 & 18)	23	44,000	14	11,450
Common Carrier Bureau (Part 22)	12	7,500	10	4,800
Cable Television (Parts 73, 76 & 78)	51	50,800	17	12,100
Private Radio Bureau - Licensees in the Maritime Service (Parts 81 & 83)	113	40,950	98	22,960
Licensees in the Private Land Mobile Service (Part 90)	14	6,700	13	4,200
Licensees in the Citizens Band Service (Part 95)	117	35,725	84	5,845
Licensees in the Amateur Radio Service (Part 97)	7	4,350	14	2,050
Citations	55	—	—	—
Totals	592	$371,850	455	$109,304

Summary of Equipment Authorizations

Type Acceptance — Table 1

Type of Equipment	Number of applications granted FY 83	Number of applications granted FY 84
Broadcast Transmitters	124	85
Non-broadcast Transmitters	628	585
Total	752	670

Registration — Table 2

Type of Equipment	Number of applications granted FY 83	Number of applications granted FY 84
Telephone Interconnect Devices	1,123	1,638
Total	1,123	1,638

Type Approval — Table 3

Type of Equipment	Number of applications granted FY 83	Number of applications granted FY 84
Part 15		
Class I TV Devices	63*	0
Specific Low Power Comm. Devices	5	1
Part 18		
Consumer Devices	123	129
Industrial Devices	6	12
Medical Devices	13	13
Parts 81 & 83		
Compulsory Ship Equipment	2	11
Totals	212	166

*Class I TV Devices have been reclassified as TV Interface Devices and are now subject to certification

Notification * — Table 4

Number of applications granted FY 84 - 635

*Effective March 5, 1984

Certification—Table 5

Type of Equipment	Number of applications granted FY 83	FY 84
Part 15		
Anti-Pilferage Device	8	2
Auditory Assistance Device (Transmitter)	5	2
Automatic Vehicle Identification System	1	0
Communications Receiver	517	220
Class B Computing Device	84	113
Class B Computing Device Peripheral	477	1,018
Cordless Base Transceiver	0	12
Cordless Remote Transceiver	0	11
Cordless Telephone System	0	100
Cordless Telephone Base Station Transceiver	147	140
Field Disturbance Sensors	25	28
Low Power Communication Device Receiver	94	56
Low Power Communication Device Transmitter	364	259
Low Power Communication Device Transceiver	65	48
Low Power Communication Transmitter below 1600 kHz	6	19
Multiband Receiver	305	138
Portable Telephone Receiver (CPT)	61	0
Public Broadcast Receiver	3,659	1,185
Scanning Receiver	16	15
Security Remote Control Transmitter	83	92
Super-regenerative Receiver	36	10
Specific Low Power Communication Device	14	2
TV Interface Device	139	318
TV Interface Device (Optional Accessory)	4	0
Part 18		
Consumer Device	3	16
Industrial Device	32	44
Medical Device	0	1
Total	6,145	3,849

Changes to Existing Equipment

	FY 83	FY 84
Type Acceptance	187	416
Type Approval	227	52
Certification	869	148
Notification	0	32
Registration	846	540
Total	1,929	1,188